

**BEFORE THE
NEW YORK STATE PUBLIC SERVICE COMMISSION
NEW YORK REGIONAL INTERCONNECT, INC.
CASE NO. 06-T-0650**

NEW YORK REGIONAL INTERCONNECT INC.

**REBUTTAL TESTIMONY OF
JONATHAN A. LESSER AND J. NÍCOLAS PUGA
ON BEHALF OF
NEW YORK REGIONAL INTERCONNECT, INC.**

MARCH 2, 2009

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1 **I INTRODUCTION, QUALIFICATIONS AND PURPOSE**

2 **A. Witnesses and qualifications**

3 **Q PLEASE STATE YOUR NAME, POSITION AND BUSINESS ADDRESS**

4 A My name is Jonathan A. Lesser. I am a Partner with Bates White,
5 LLC (Bates White or “the firm”), an economic and litigation consulting
6 firm. My business address is 1300 Eye Street, N.W., Suite 600,
7 Washington, DC 20005.

8 **Q PLEASE SUMMARIZE YOUR QUALIFICATIONS.**

9 A I have 25 years of experience in the energy industry. I have worked
10 for electric utilities, government agencies, and as an economic consultant.
11 I have addressed numerous economic and regulatory issues that affect the
12 energy industry; these include: wholesale market design, gas and electric
13 utility structure and operations, cost-benefit analysis of utility mergers,
14 cost-benefit studies of transmission development, cost allocation and rate
15 design, resource investment decision strategies, cost of capital,
16 depreciation, risk management, incentive regulation, economic impact
17 studies, and general regulatory policy. I have prepared expert testimony
18 and reports in cases before public utility commissions in numerous states,
19 the Federal Energy Regulatory Commission (FERC or “the Commission”);
20 before regulators in Belize, Guatemala, Mexico, and Puerto Rico; in

1 commercial litigation cases; and before legislative committees in
2 Connecticut, Maryland, Texas, Vermont, and Washington. I am also the
3 coauthor of *Fundamentals of Energy Regulation*, which was published in
4 August 2007 by Public Utilities Reports, Inc. A copy of my curriculum
5 vitae is attached as Exhibit No. JAL/JNP-1.

6 Before joining Bates White, I served as Director of Regulated
7 Planning for the Vermont Department of Public Service. Previously, I had
8 been employed as Senior Managing Economist by Navigant Consulting.
9 Prior to that, I was the Manager, Economic Analysis, for Green Mountain
10 Power Corporation. I also spent seven years as an Energy Policy Specialist
11 with the Washington State Energy Office and also worked for Idaho
12 Power Corporation and the Pacific Northwest Utilities Conference
13 Committee, an industry trade group, where I specialized in load
14 forecasting.

15 I hold M.A. and Ph.D. degrees in economics from the University of
16 Washington and a B.S. in mathematics and economics from the University
17 of New Mexico.

18 **Q HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE NEW YORK**
19 **PUBLIC SERVICE COMMISSION ("NYPSC" OR "THE**
20 **COMMISSION")?**

21 **A** No, I have not.

1 **Q PLEASE STATE YOUR NAME, POSITION AND BUSINESS ADDRESS**

2 A My name is J. Nicolas Puga. I am also a Partner with Bates White,
3 LLC (Bates White or “the firm”), an economic and litigation consulting
4 firm. My business address is 1300 Eye Street, N.W., Suite 600,
5 Washington, DC 20005.

6 **Q PLEASE SUMMARIZE YOUR QUALIFICATIONS.**

7 A. I have a B.S. in Electrical Engineering from Universidad de
8 Guanajuato in Salamanca, Mexico. I also obtained an M.S. in energy
9 engineering from the University of Arizona. I have over 28 years of
10 experience in electric and natural gas market analysis and supply and
11 demand-side resource planning and have advised various electric and gas
12 utilities as well as other entities. I was employed by the Comisión Federal
13 de Electricidad (CFE), the Mexican Government’s vertically integrated
14 utility, in Special Projects from 1975 to 1977. I served as a Research
15 Engineer for the Instituto de Investigaciones Eléctricas, the Mexican
16 Government’s Electrical Research Institute, from 1977 through 1980. Since
17 1984, I have worked as a consultant in the U.S. and various other
18 countries. From 1984 until 1990, I was Vice President of ANCO Engineers,
19 an energy technology consulting firm located in 3 Culver City, California,
20 where I worked on the design and implementation of several large-scale

1 utility demand-side management programs in the U.S. and Australia. I
2 joined Resource Management International, Inc. (RMI), an international
3 energy consulting firm in 1990, where I served as Vice President, Demand-
4 Side Management. During my employment with RMI, I worked on a
5 variety of energy efficiency and demand-side management consulting
6 projects in the U.S., Canada, the Philippines and Indonesia. From 1996 to
7 1999, I worked as resident advisor to the Philippine Government and
8 electric distribution utilities in demand-side management and integrated
9 resource planning. RMI was acquired by and subsequently merged into
10 Navigant Consulting, Inc. in 1999, where I worked until 2005. From 2005
11 to 2007, I worked as an independent consultant advising the California
12 Energy Commission on the potential for energy efficiency and combined
13 heat and power in the California, Mexico border maquiladora industry. In
14 2007 I joined the energy practice of Bates White, LLC. A copy of my
15 curriculum vitae is attached as Exhibit No. JAL/JNP-2.

16 **Q. PLEASE DESCRIBE OTHER REPRESENTATIVE CONSULTING**
17 **PROJECTS RELEVANT TO THIS PROCEEDING THAT YOU HAVE**
18 **WORKED ON.**

19 **A.** I have worked on due diligence for independent power project
20 developers seeking to build generation facilities and for financial
21 institutions involved in financing privately owned generation and

1 transmission projects. I performed studies concerning generation dispatch
2 protocols and issues relating to transmission constraints associated with
3 the interconnection of new generation projects. Representative clients
4 include the United States Agency for International Development, the
5 California Energy Commission, Credit Agricôle Indosuez, Electricité de
6 France, Mizuho Corporate Bank, the Japan Bank for International
7 Cooperation, and other entities. I testified in front of the Public Utility
8 Commission of Texas (PUCT) in the application for a Certificate of
9 Convenience and Necessity (CCN) for the first high voltage direct current
10 open access transmission interconnection between Texas and Northeast
11 México, as to the economic benefits of the tie. More recently, I appeared in
12 front of the Virginia State Corporation Commission to explain some of the
13 results of an independent reliability needs assessment of a proposed 265-
14 mile 502 Junction-Mt. Storm-Meadow Brook-Loudoun 500 kV
15 Transmission Line conducted under my direction. I testified as to the
16 ability of PJM's RPM demand response programs to provide the same
17 level of long-term reliability as that of the proposed line.

18 **Q HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE NYPSC?**

19 **A** No, I have not.

1 **B. Purpose of Testimony**

2 **Q WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

3 A First, our testimony discusses how the NYRI project will help the
4 State of New York meet three important state energy policy goals. These
5 include: (1) meeting the state's Renewable Portfolio Standard (RPS),
6 primarily by building new wind-power generating plants in western and
7 northern New York; (2) increasing fuel and locational supply diversity to
8 combat a recognized over-reliance on gas-fired generation in southeastern
9 New York ("SENY"); and (3) reducing greenhouse gas emission consistent
10 with the state's participation in the Regional Greenhouse Gas Initiative
11 ("RGGI").

12 Second, our testimony rebuts the conclusions of a number of
13 intervenor witnesses. In general, New York Department of Public Service
14 Staff ("NYDPS") and intervenors' witnesses have ignored the energy
15 policy benefits the NYRI project would stimulate, and instead focused on
16 an inappropriately narrow evaluation of the project. Moreover,
17 intervenors are inconsistent among themselves as to how even these
18 narrow benefits should be defined. Some argue the benefits of the project
19 should be based solely on production cost savings, whereas others argue
20 that one cannot base benefits on production cost savings. Taken together,

1 the intervenors' testimony means the benefits of additional transmission
2 capacity cannot be measured at all.

3 DPS Staff and intervenors have assumed away key issues and
4 uncertainties. For example, they assume, without any evidence, that the
5 current NYISO load forecast cannot be wrong, that forecast loads, which
6 have decreased, in part, because of the economic downturn, cannot
7 possibly increase. They assume the goals of the state's Energy Efficiency
8 Portfolio Standard (EEPS), also known as "15x15" because it is supposed
9 to achieve a 15% reduction in electric consumption by 2015, will be met
10 simply because the goals has been established, ignoring the fact that the
11 necessary programs are in their infancy. Moreover, they assume that such
12 energy efficiency programs will be almost "too cheap to meter" and can
13 obviate the need for any new transmission investment.

14 Some parties recommend that generators be built in New York City,
15 even though doing so will exacerbate SENY's exposure to volatile fuel
16 prices, in contrast to state policy goals. They also assume that generating
17 plants that were cancelled years ago will nevertheless be built and,
18 moreover, will be better alternatives than NYRI. They also assume that,
19 even though there is insufficient transmission capacity to provide
20 deliverability for the amount of wind resources that will be needed to

1 meet the state's RPS goal, these wind resources will nevertheless be
2 developed. They assume that converting an existing NYPA transmission
3 line to DC is preferable to building NYRI, despite the lack of any
4 supporting evidence and even though NYPA witness O'Connor himself
5 admits that there are currently no plans to develop this line in the future.

6 **Q PLEASE IDENTIFY THE SPECIFIC WITNESSES WHOSE**
7 **TESTIMONY YOU ARE REBUTTING.**

8 **A** We rebut the testimony of the following witnesses:

- 9 ▪ New York Department of Public Service ("NYDPS") witnesses James
10 de Waal Malefyt, Leka Gjonaj and David Wheat, Thomas Paynter, and
11 Edward Schrom; and
- 12 ▪ Communities Against Regional Interconnect ("CARI") witness Richard
13 Spellman

14 **II. SUMMARY OF FINDINGS**

15 **A. There is a demonstrated need for additional transmission**
16 **capacity from UPNY to SENY, and throughout the Mid-Atlantic**
17 **Region**

18 **Q PLEASE DISCUSS THE U.S. DEPARTMENT OF ENERGY'S ("DOE")**
19 **DESIGNATION OF A MID-ATLANTIC AREA NATIONAL**
20 **TRANSMISSION CORRIDOR**

21 **A** On May 7, 2007, DOE issued its draft report (attached as Exhibit
22 No. JAL/JNP-3) regarding two recommended transmission corridors and
23 opening dockets to review its findings ("DOE Draft Report").¹

¹ 72 Fed. Reg. 25838.

1 Subsequently, after taking comments on this draft report and holding
2 several public hearings, on October 5, 2007, DOE issued its final “National
3 Electric Transmission Congestion Report” (“DOE Final Report”). The
4 DOE Report designated two National Interest Transmission Corridors.²
5 One of those was the “Mid-Atlantic Area National Interest Electric
6 Transmission Corridor,” which extends from upstate New York to
7 Maryland. Exhibit No. JAL/JNP-4 provides a map of the Mid-Atlantic
8 Corridor. As stated in the report, DOE’s designation of such a corridor
9 takes into account a number of policy criteria, including the following:

10 (A) the economic vitality and development of
11 the corridor, or the end markets served by the
12 corridor, may be constrained by lack of
13 adequate or reasonably priced electricity;

14 (B)(i) economic growth in the corridor, or the
15 end markets served by the corridor, may be
16 jeopardized by reliance on limited sources of
17 energy; and (ii) a diversification of supply is
18 warranted;

19 (C) the energy independence of the United
20 States would be served by the designation;

21 (D) the designation would be in the interest of
22 national energy policy; and

23 (E) the designation would enhance national
24 defense and homeland security.³

² 72 Fed. Reg. 56992, Rehearing Den’d, March 6, 2008.

³ 72 Fed. Reg. 56992-3.

1 The DOE notes that the Congestion Study identified the Mid-Atlantic
2 Area “based on evidence of historical, persistent congestion caused by
3 numerous well known constraints that are projected to continue and
4 worsen unless addressed through remedial measures”⁴ and that it had
5 “documented the existence of persistent congestion through regional
6 differences in generation capacity factors within the footprints of the PJM
7 Interconnection, LLC, (PJM) and the New York Independent System
8 Operator (NYISO).”⁵

9 **Q HOW DID DOE DEFINE CONGESTION IN THE REPORT?**

10 A The DOE Report defined congestion as “as the condition that
11 occurs when transmission capacity is not sufficient to enable safe delivery
12 of all scheduled or desired wholesale electricity transfers simultaneously.
13 This definition was based on common usage within electric system
14 operations and spurred little dissent among commenters on the
15 Congestion Study.”⁶

16 **Q DID DOE FIND THAT UPSTATE GENERATION IN NEW YORK WAS**
17 **PREVENTED FROM BEING USED EFFICIENTLY BECAUSE OF**
18 **TRANSMISSION CONSTRAINTS?**

19 A Yes. For example, the DOE Draft Report states that,

⁴ 72 Fed. Reg. 56995.

⁵ Id. (fns. omitted).

⁶ Id., at 57003 (fn. omitted).

1
2 “The effects of transmission congestion start to become
3 apparent in the \$60–70/MW class, where lower-cost capacity
4 in Upstate East is available but its output is not always
5 deliverable to Downstate. Downstate has more than 14,250
6 MW of capacity with production costs of \$70/MW or higher
7 (up to more than \$200/MW), whereas Upstate East and
8 Upstate West combined have only about 5100 MW at
9 \$70/MW or higher. Further, according to both historical data
10 and DOE’s projections for 2008, the units in Downstate in all
11 classes with production costs above \$70/MW almost always
12 operate at higher capacity factors than in the other two
13 areas.”⁷
14

15 In other words, because of the transmission constraints, lower-cost
16 generation in upstate New York cannot always be dispatched. As a result,
17 higher cost generation in southeastern New York (“SENY”) is dispatched
18 instead. This reduces economic efficiency and increases the prices New
19 Yorkers pay for electricity.

20 **Q DID DOE FIND THAT THIS LOSS OF GENERATION PLANT**
21 **EFFICIENCY HAS ECONOMIC CONSEQUENCES?**

22 **A** Yes. The DOE Draft Report stated that,
23
24 “For the area served by NYISO, historical electricity price
25 data from 2004 through 2006 show a persistent pattern of
26 substantially lower wholesale electricity prices in the day-
27 ahead market for the western and upstate zones than in New
28 York City and Long Island. (See Figure VIII–12.) As a result
29 of this persistent disparity, electricity consumers in the area
30 north of New York City, the City itself, and on Long Island
31 end up paying higher electricity bills than consumers in the

⁷ 72 Fed. Reg. 25876 (emph. added).

1 rest of the State of New York ... As one might expect, the
2 price disparity widened considerably when the electricity
3 supply system was working close to its physical limits, as on
4 hot summer days.”⁸
5

6 **Q WHAT IS AN ECONOMICALLY RATIONAL APPROACH TO PRICE**
7 **DISPARITIES SUCH AS THOSE IDENTIFIED IN THE DOE DRAFT**
8 **REPORT?**

9 **A**From a strict economic standpoint – and not addressing any of the
10 other public policy issues, such as increased fuel diversity, increased
11 renewable resource development, and reductions of greenhouse gases –
12 the logical economic response to transmission constraints that cause
13 generation dispatch inefficiency and high localized market prices is to
14 either build new transmission capacity to address the existing
15 transmission constraints or add new generating and load management
16 capacity in the areas where prices are highest. The findings of the DOE
17 Draft Report, which DOE affirmed in its Final Report and subsequent
18 denial of a request for rehearing on its findings, affirmed that significant
19 transmission constraints exist in New York State that prevent the
20 economic flow of electricity from lower-cost Upstate regions to the higher-
21 cost SENY region.

⁸ 72 Fed. Reg. 25888-91 (emph. added).

1 **B. The NYRI Project will help the State of New York achieve**
2 **established state policy goals, and allow development of lower**
3 **cost generation in UPNY.**

4 **Q PLEASE SUMMARIZE THE STATE’S ENERGY POLICY GOALS.**

5 A New York State has three major energy policy goals. First, the state
6 has established a Renewable Portfolio Standard (“RPS”) under which 25%
7 of total electric generation is to be derived from renewable resources (e.g.,
8 wind, solar, and hydro) by the year 2013, just four years from now. In his
9 January 7, 2009, “State of the State” address, Governor Patterson
10 suggested that this goal should be increased further to 30% by 2015, plus
11 the current goal of a 15% reduction in electricity usage achieved through
12 energy conservation.⁹ The Governor also stated that, “It is time to make
13 New York more energy independent and more energy efficient, to develop
14 our own sources of clean and renewable energy, and to build new
15 statewide systems for energy generation, transmission, and
16 distribution.”¹⁰

⁹ The text of Governor Patterson’s address can be found at:
http://www.state.ny.us/governor/keydocs/speech_0107091.html. The 15 percent
energy conservation goal is the same as the existing “15x15” program put into place
by the New York Public Service Commission.

¹⁰ Id.

1 **Q WHAT IS THE SECOND ENERGY POLICY GOAL?**

2 A The second state energy policy goal is to reduce greenhouse gas
3 emissions. New York State is a member of the RGGI and recently held its
4 first auction of carbon allowances. Under the Memorandum of
5 Understanding issued in 2005, the governors of ten Northeastern and
6 Mid-Atlantic States have committed to state regulations that will cap and
7 then reduce the amount of the greenhouse gas carbon dioxide (CO₂) that
8 power plants are allowed to emit.¹¹ Specifically, electric power plants in
9 New York will be required to reduce greenhouse gas emissions by 10% by
10 the year 2018. These emissions reductions increase the cost of fossil fuel
11 generation, thus making development of renewable generation in New
12 York more cost-effective.

13 **Q WHAT IS THE THIRD STATE ENERGY POLICY GOAL?**

14 A The third energy policy goal is to increase fuel and resource
15 diversity. For example, in the 2002 New York State Energy Plan, one of the
16 policy goals outlined was "Increasing energy diversity in all sectors of the
17 State's economy through greater use of energy efficiency technologies, and
18 alternative energy resources, including renewable-based energy."¹²

¹¹ Available at: <http://www.rggi.org/about/history/mou>.

¹² New York State Energy Plan 2002, at S-2. Available at:
<http://www.nyserda.org/sep/sepexecsummary.pdf>.

1 Governor Patterson's April 9, 2008 Executive Order establishing
2 development of a new State Energy Plan in 2009 also highlighted energy
3 diversity.¹³

4 **Q WILL THE NYRI PROJECT HELP THE STATE ACHIEVE THESE**
5 **THREE ENERGY POLICY GOALS?**

6 A Yes. The NYRI project will increase transmission capacity into
7 SENY and provide a needed link to connect upstate wind generation,
8 where wind resources can be developed at a lower cost than, for example,
9 building offshore, with the major load centers in SENY. Thus, NYRI will
10 promote what Governor Patterson called for in his State-of-the State
11 address. Moreover, NYRI will allow lower-cost additional gas-fired
12 generation to be built sooner in upstate New York ("UPNY"). This will
13 benefit consumers because land and labor costs are lower than in SENY
14 and, especially, lower than New York City and Long Island. Additional
15 energy resource development in upstate New York will also provide much
16 needed jobs and economic development opportunities.

17 As the DOE Study found, existing transmission constraints from
18 West-to-East and North-to-South currently prevent full dispatch of lower-
19 cost generation in UPNY. The most prevalent and most cost-effective

¹³ Executive Order No. 2, April 9, 2008, at 2. Available at:
<http://www.nysenergyplan.com/presentations/NYS%20Energy%20Plan%20Framework%20Document2.pdf>.

1 wind resources are located in UPNY. Without added transmission
2 capacity, however, new wind generation will be constrained from
3 delivering power to SENY. Since the state's RPS is not based on installed
4 capacity (i.e., "iron in the ground"), but rather actual generation of
5 renewable electricity, it is critical to relieve existing UPNY transmission
6 constraints.

7 **Q HAS THE FEDERAL ENERGY COMMISSION ("FERC") ISSUED ANY**
8 **RULINGS ABOUT THE NYRI PROJECT?**

9 A Yes. The NYRI project is precisely the type of innovative
10 transmission project FERC encouraged to be developed under the
11 guidelines it developed in Order No. 679 and Order No. 679-A.¹⁴
12 Recognizing the innovative nature and advanced technology to be used
13 by the NYRI project, as well as the inherent financial risks, the
14 Commission increased the authorized return for the project by a total of
15 275 basis points ("bp").¹⁵ Specifically, the Commission Order stated that,
16 "The Commission has recognized and encouraged the proven track record
17 of Transco investment in transmission infrastructure and the need for

¹⁴ *Promoting Transmission Investment through Pricing Reform*, Order No. 679, FERC Stats. & Regs. ¶ 31,222 (2006), *order on reh'g*, Order No. 679-A, FERC Stats. & Regs. ¶ 31,236 (2006) *order on reh'g*, 119 FERC ¶ 61,062 (2007).

¹⁵ *New York Regional Interconnect, Inc.*, 124 FERC ¶ 61,259 (2008). A basis point equals 1/100th of one percent. The incentives include 50 bp for membership in a RTO, 100 bp for independent ownership, and 125 bp for advanced technology.

1 increased transmission in general,”¹⁶ and that “[t]he advanced
2 technologies proposed will improve capacity, efficiency and reliability for
3 the Project.”¹⁷ From a policy perspective, it makes little sense to have
4 federal energy regulators promoting innovative transmission projects like
5 NYRI, while state energy regulators discourage, or impose impossible
6 regulatory hurdles on those same projects.

7 **Q DOES NYISO’S COMPREHENSIVE RELIABILITY PLANNING**
8 **PROCESS INCLUDE MEETING STATE OR FEDERAL ENERGY**
9 **POLICY GOALS?**

10 A No. NYISO’s Comprehensive Reliability Planning Process
11 (“CRPP”) is focused solely on ensuring that NYISO meets established
12 reliability standards, and nothing else. According to NYISO witness John
13 Buechler, “NYISO is not a government agency, and its does not take
14 public policy considerations into account when analyzing the impact of
15 proposed facilities on reliability needs it identifies.”¹⁸

16 **Q DOES THE NEW NYISO CONGESTION ASSESSMENT AND**
17 **RESOURCE INTEGRATION STUDY ADDRESS ANY OF THE STATE**
18 **ENERGY POLICY GOALS YOU PREVIOUSLY SUMMARIZED?**

¹⁶ 124 FERC ¶ 61,259, Par 41.

¹⁷ 124 FERC ¶ 61,259, Par 52.

¹⁸ New York Independent System Operator, Direct Testimony of John P. Buechler, January 9, 2009 (“Buechler Testimony”), at 26, lines 2-4.

1 A No. As stated by NYISO witness Buechler, NYISO will begin
2 implementing its Comprehensive Assessment and Resource Integration
3 Study (“CARIS”) this year.¹⁹ CARIS is a part of the larger CRPP and
4 entails an economic assessment of the costs and benefits of investments
5 that reduce transmission system congestion. Under CARIS, proposed
6 transmission system investments that are financed by ratepayers must
7 pass a cost-benefit test. According to the relevant language contained in
8 the NYISO tariff and provided in Exhibit JPB-1,

9 “The principal benefit metric for the CARIS analysis will be
10 expressed as the present value of the NYCA-wide
11 production cost reduction that would result from each
12 potential solution. Additional benefit metrics shall include
13 estimates of reductions in losses, LBMP load costs, generator
14 payments, ICAP costs, Ancillary Services costs, emission
15 costs, and TCC payments.”²⁰

16 Thus, NYISO does not envision that its CARIS process will address any
17 public policy benefits in its cost-benefit analyses of investments that
18 reduce transmission system congestion.

19 Furthermore, the NYISO CRPP favors projects proposed by the
20 “Responsible Transmission Owners” (“RTOs”), i.e., the local distribution
21 utilities, over other projects. Only if projects submitted by the RTOs are

¹⁹ Id., at 9, line 10.

²⁰ Exhibit JPB-1, at 33.

1 insufficient to meet NYISO's reliability needs will independent
2 developers' projects be considered as "regulated solutions" paid for by
3 ratepayers.

4 **Q ARE PROJECTS THAT DO NOT PROVIDE RELIABILITY BENEFITS,**
5 **BUT DO PROVIDE PUBLIC POLICY BENEFITS, SUCH AS**
6 **ALLOWING GREATER DELIVERABILITY OF RENEWABLE**
7 **GENERATION, ELIGIBLE TO BE CONSIDERED UNDER CARIS?**

8 A No. As NYISO witness Buechler testifies, NYISO "does not take
9 public policy considerations into account when analyzing the impact of
10 proposed facilities on reliability needs it identifies. The decision whether
11 there is a public need for the NYRI line is up to the PSC" [Buechler
12 Testimony, at 27, lines 2-5].

13 **C. The alternatives to the NYRI project identified by intervenors are**
14 **not consistent with the state's policy goals, and will not relieve**
15 **existing transmission constraints.**

16 **Q WHAT ALTERNATIVES TO NYRI HAVE BEEN PROPOSED BY**
17 **WITNESSES ON BEHALF OF THE NYDPS?**

18 A Several NYDPS witnesses propose building gas-fired generating
19 units in lieu of NYRI. NYDPS witnesses Gjonaj and Wheat evaluated a
20 hypothetical 1,200 MW gas-fired generating plant located either in UPNY,
21 SENY, or New York City.²¹ NYDPS witness de Waal Malefyt proposed a

²¹ New York Department of Public Service, Prepared Testimony of Leka P. Gjonaj and David V. Wheat, January 9, 2009, ("Gjonaj and Wheat Testimony"), at 26:, lines 17-21.

1 1,200 MW gas-fired generating plant (or two, 600MW plants) in the
2 Hudson Valley, near the proposed terminus of the NYRI project.²² Mr. de
3 Waal Malefyt also favorably referred to several generating projects that
4 were cancelled years ago: Mirant Bowline L.L.C. for a 750 MW natural
5 gas-fired plant in the Town of Haverstraw, Rockland County, and to
6 Calpine Construction Finance Company, L.P. for a 540 MW natural gas-
7 fired plant in the Town of Wawayanda, Orange County. He also referred
8 to a 580MW gas-fired plant that may be built by CPV Valley LLC near the
9 Wawayanda site where the cancelled Calpine plant would have been
10 located.²³ NYDPS witness Schrom recommended either a generating plant
11 in SENY or investments in energy efficiency sufficient to avoid the need
12 for either new transmission or generation.²⁴ Mr. Schrom also testified that
13 a proposal that NYPA “suggested”, to change one of its two existing
14 Marcy South Circuits to HVDC, would be preferable to NYRI,²⁵ but
15 provided no supporting evidence other than his “opinion.” Furthermore,

²² New York Department of Public Service, Prepared Testimony of James J. de Waal Malefyt, January 9, 2009, (“de Waal Malefyt Testimony”), at 26, lines 8-22.

²³ Id., at 27, lines 20-23.

²⁴ New York Department of Public Service, Prepared Testimony of Edward Schrom, January 9, 2009, (“Schrom Testimony”), at 16, lines 8-23.

²⁵ Id., at 17, lines 2-13.

1 NYPA witness O'Connor stated that NYPA has no plans to develop the
2 Marcy South alternative at this time.²⁶

3 **Q WHAT ALTERNATIVES HAVE BEEN PROPOSED BY WITNESSES ON**
4 **BEHALF OF CARI?**

5 A CARI witness Lanzalotta proposed two alternative transmission
6 projects. The first is to follow the Marcy South route evaluated by NYRI
7 but have the line be entirely underground. The second is an alternative
8 HVDC facility that would follow a much different route from Marcy
9 South directly into New York City. Specifically, it would follow the route
10 that had been proposed for the Empire Connection Project, which was
11 cancelled in 2004 because no subscribers for that line's capacity could be
12 found.²⁷ However, we understand that a January 26, 2009 ruling by
13 NYPSC Administrative Law Judges Philips and Stockholm held that the
14 alternative routing proposed by Mr. Lanzalotta could not be considered in
15 this case, as this alternative "is not a reasonable alternate route to NYRI's
16 proposal, but is rather a fundamentally different project."²⁸

²⁶ New York Power Authority, Direct Testimony of Mark D. O'Connor, January 9, 2009 ("O'Connor Testimony"), at 5.

²⁷ Communities Against Regional Interconnect, Prepared Testimony of Peter J. Lanzalotta, January 9, 2009 ("Lanzalotta Testimony"), at 9, lines 5-18. See also, Communities Against Regional Interconnect, Response to Procedural Ruling of December 2, 2008, December 8, 2008, at 1-2.

²⁸ Application of New York Regional Interconnect, Inc. for a Certificate of Environmental Compatibility and Public Need Pursuant to Article VII for a High

1 CARI witness Spellman, on the other hand, testifies that
2 comprehensive DSM programs in SENY can eliminate the need for NYRI
3 entirely.²⁹

4 **Q ARE YOU AWARE OF ANY OTHER TRANSMISSION OR**
5 **GENERATION ALTERNATIVES TO THE NYRI PROJECT THAT**
6 **HAVE BEEN PROPOSED BY INTERVENORS?**

7 **A** No we are not.

8 **Q PLEASE EXPLAIN WHY THE NATURAL GAS-FIRED GENERATING**
9 **UNITS PROPOSED ARE NOT REASONABLE ALTERNATIVES TO**
10 **THE NYRI PROJECT.**

11 **A** All of the generation alternatives proposed are gas-fired. As
12 discussed in a November 2008 White Paper issued by the New York
13 Independent System Operator ("NYISO"), which is attached as Exhibit
14 No. JAL/JNP-5, building new gas-fired units in southeastern New York
15 will further exacerbate the region's reliance on gas-fired generation, which
16 already sets the market price in 90% of all hours.³⁰ Therefore, rather than
17 increasing energy resource diversity, these generation alternatives will

Voltage Direct Current Electric Transmission Line Running Between National Grid's Edic Substation in the Town of Marcy, and Central Hudson Gas & Electric's Rock Tavern Substation Located in the Town of New Windsor, Case No. 06-T-0650, Ruling on Scope, Hearing Procedures, and Schedule, January 26, 2009, at 5.

²⁹ Communities Against Regional Interconnect, Prepared Testimony of Richard F. Spellman, January 9, 2009 ("Spellman Testimony"), at 4, lines 2-6.

³⁰ New York Independent System Operator, "Transmission Expansion in New York State," White Paper, November 2008 ("NYISO Transmission White Paper"), p. 4-5.

1 exacerbate an already existing over-reliance on gas-fired generation,
2 contrary to state policy. Also, the inability of the natural gas pipeline
3 system to deliver firm service in some area of SENY, could force new gas-
4 fired generators to burn oil during peak load periods, increasing pollutant
5 emissions.

6 Moreover, building generation in SENY and New York City will do
7 nothing to relieve the long-standing West-to-East and North-to-South
8 transmission constraints in NYISO and, as a result, will not provide any
9 solution to the current inability to deliver the quantity of renewable power
10 that is required under the state's RPS mandates. Again, that is contrary to
11 state policy. As the NYISO Transmission White Paper states,

12 “Without investment in additional transmission
13 infrastructure to balance and move wind energy to the load
14 centers in the southeastern regions of the state, it may
15 become difficult for New York to meet its state RPS targets.³¹

16 Under Governor Patterson's call to increase that RPS target to 30% of total
17 electric generation by 2015, it will become still more difficult for the state
18 to meet its RPS targets without new transmission projects like NYRI.

19 **Q PLEASE EXPLAIN WHY THE ALL-UNDERGROUND**
20 **TRANSMISSION PROJECT PROPOSED BY CARI WITNESS**
21 **LANZALOTTA IS NOT A REASONABLE ALTERNATIVE TO THE**
22 **NYRI PROJECT.**

³¹ NYISO Transmission White Paper, p. 4-3.

1 A First, in our opinion the CARI all-underground option is a “red-
2 herring” designed to further delay and lead to the eventual cancellation of
3 the NYRI project. The CARI proposal would cost far more than the NYRI
4 project, but would have a lower transmission capacity. Since several
5 NYDPS witnesses, as well as ConEd witness Forte, have based their
6 objections to the NYRI project because the proposed construction costs
7 would be greater than the direct benefits (as measured by production cost
8 savings), a more expensive but lower capacity alternative would
9 obviously fail the same cost-benefit test.

10 As for the NYPA project to reconfigure one of its existing Marcy
11 South circuits into an HVDC line, NYPA witness O’Connor states there are
12 no current plans to develop the project. The project is not in the NYISO’s
13 transmission and generation “queue,” and none of the required studies
14 necessary to obtain approval from NYISO for the project have been
15 submitted to NYISO. We assume that, if the NYPA project were as
16 superior an alternative as NYDPS witness Schrom states, that either NYPA
17 or an independent transmission developer would have submitted the
18 project to the NYISO long ago.

19

1 **Q HAVE THERE BEEN ANY MAJOR TRANSMISSION PROJECTS**
2 **THAT HAVE BEEN BUILT IN NEW YORK IN THE RECENT PAST?**

3 **A**We are aware of the Neptune Project, an undersea HVDC cable
4 from New Jersey to Long Island and the cross sound cable running
5 between Connecticut and Long Island – both of which sold their capacity
6 to LIPA under long-term contracts. A number of proposed merchant
7 transmission projects have been cancelled. We understand that the last
8 such proposed project was the Empire State Transmission Project, which
9 failed to receive any subscribers for the transmission capacity it would
10 have provided if built. As a result, the project was withdrawn in 2004 by
11 its developer, Conjunction, LLC. Some similar projects have been
12 permitted within a utility's own service area including Con Ed's M-29
13 project. Although construction on that project was started, we understand
14 that the project has now been caught up in a criminal investigation of Con
15 Ed's contracting practices. Given the public good nature of transmission
16 investment, it is not surprising that there has been no successful
17 development of merchant transmission upgrades in the state.

18

19

1 **Q PLEASE EXPLAIN WHY CARI WITNESS SPELLMAN’S TESTIMONY**
2 **THAT ENERGY EFFICIENCY CAN OBVIATE THE NEED FOR THE**
3 **NYRI PROJECT IS NOT REASONABLE.**

4 **A**First, Mr. Spellman’s energy efficiency study, which is presented as
5 his Exhibit RFS-2, is riddled with errors. Mr. Spellman’s assumed cost-
6 effectiveness criterion of seven cents per kilowatt-hour (\$0.07/kWh)³² is
7 irrelevant, as it is not based on any type of recognized cost-effectiveness
8 methodology, but it rather relies on a comparison to LBMP estimates of
9 questionable validity. Moreover, Mr. Spellman assumes that the reliability
10 benefits of energy efficiency measures are equivalent to those of new
11 generation and transmission facilities. Whereas transmission and
12 generation facilities are dispatchable by transmission system operators,
13 energy efficiency measures, unlike generation, transmission and demand
14 response, are not, thus reducing their reliability benefits.

15 Second, Mr. Spellman’s approach to estimating the amount of cost-
16 effective energy efficiency savings layers erroneous assumption upon
17 erroneous assumption, resulting in a study whose results are neither
18 credible nor economically sound.

19 Third, nowhere does Mr. Spellman address how his energy
20 efficiency proposal, as an alternative to the NYRI transmission line, would

³² Exhibit RFS-2, at 56-57.

1 deliver the public benefits of the proposed line, such as helping meet the
2 state's RPS requirement by enabling the power from renewable resources
3 developed in UPNY to be delivered to consumers in SENY. DSM
4 measures installed in SENY will do nothing to relieve the existing
5 transmission system constraints and inability of existing generation, much
6 less the thousands of MW of new renewable generation that will be
7 needed to meet the RPS, to obtain unfettered access to the transmission
8 system.

9 **Q PLEASE SUMMARIZE THE ERRONEOUS ASSUMPTIONS MADE IN**
10 **WITNESS SPELLMAN'S ENERGY EFFICIENCY STUDY.**

11 **A** First, Mr. Spellman failed to carry out any appliance saturation
12 surveys for specific energy efficiency measures in his proposal. Without
13 knowing how many appliances are in place, called "saturation," it is
14 impossible to determine potential energy savings from a specific
15 appliance-related measure, such as targeting second refrigerators.

16 Second, Mr. Spellman relied on generic energy savings estimates
17 that do not capture the inherent variability associated with different
18 climate conditions, the ages of buildings and equipment, the relative size
19 of homes and apartments, or the demographics affecting customers'
20 willingness to participate in energy efficiency programs, even when such
21 measures are offered "free" to those customers.

1 Third, Mr. Spellman failed to consider the risks inherent in any
2 programmatic effort to capture energy-efficiency, both in achieving the
3 goals of what in essence are marketing programs, and also in the actual
4 persistence of those energy savings. This is another key reason why
5 generic energy efficiency measures , such as installing compact fluorescent
6 light bulbs and other “efficient lighting” measures, do not provide the
7 same level of reliability as new transmission or generation investments.

8 **Q MR. PUGA, DO YOU CONSIDER YOURSELF AN EXPERT IN**
9 **ENERGY EFFICIENCY ANALYSIS?**

10 **A** Yes. A significant part of my professional focus since 1982 has been
11 the analysis of applications of energy efficiency technologies to diverse
12 end-uses of energy by residential, commercial and industrial energy
13 consumers, and the often necessary incentives and programs to advance
14 their adoption, has been. In the course of my 25-plus year career, I have
15 worked extensively in the modeling of building energy use, the design
16 and implementation of commercial and industrial customer surveys and
17 energy auditing of residential, commercial and industrial facilities. I have
18 also worked in most aspects of the design, implementation and evaluation
19 of utility energy efficiency and demand-management programs, including
20 the engineering, installation and performance monitoring of energy-
21 efficient end-use technologies. As a matter of fact, utility demand-side

1 management was at the core of my professional employment through
2 1999.

3 **Q MR. PUGA, DO YOU HAVE ANY OTHER CONCERNS ABOUT MR.**
4 **SPELLMAN'S ENERGY EFFICIENCY NON-ROUTE ALTERNATIVE?**

5 A Yes. The concept of full equivalency between what amounts to
6 vaguely sketched proposals for energy-efficiency programs and the
7 proposed NYRI transmission line is fatally flawed for a number of
8 reasons. First, energy efficiency programs are marketing programs
9 designed to produce their impacts over a number of years with significant
10 uncertainty as to their ultimate ability to achieve their participation goals,
11 unlike a transmission line that, once built, is likely to operate close to its
12 design capacity for the physical life of its components. Second, as already
13 mentioned by Dr. Lesser, energy efficiency resources are not dispatchable,
14 in contrast to the controllable nature of the proposed NYRI DC
15 transmission line, nor offer the flexibility to provide access to diverse
16 resources to serve load. Third, energy efficiency measure retention and
17 persistence of energy savings over a period comparable to the life of the
18 proposed transmission line have never been demonstrated.

19 **Q CAN YOU PLEASE ELABORATE?**

20 A Yes. While the literature cited by Mr. Spellman focuses on the most
21 successful energy efficiency programs ever fielded, a more comprehensive

1 literature review reveals many energy efficiency programs that have not
2 fully met their goals. For example, in 2001, the Florida investor-owned
3 utilities reported to the Florida PSC that they missed their Summer MW
4 reduction goals of 213.6 MW by 31%. This is not an isolated case; in the
5 1990's, during the peak activity era of utility funded energy efficiency
6 programs, many utilities missed their goals.³³ And more recently, a meta-
7 analysis carried out in 2004 by the American Council for an Energy
8 Efficient Economy³⁴ showed that while potential studies at the time
9 showed a median achievable annual savings potential of 1.2% of electric
10 sales per year, there were only a few recorded examples of actual
11 electricity savings above 1% per year. Thus, while the effective transfer
12 capacity of the proposed line will become available from the moment it is
13 energized, as permitted by the operating limits of the transmission
14 infrastructure beyond its two interconnection points, the effective energy
15 and demand reductions of the energy-efficiency "alternative" will only be
16 known at the end of the ten-year life of its programs. This, in of itself,

³³ Renz Jennings, Martin Pasqualetti, Merrilee Harrigan, and Robert Boscamp, "DSM Programs Must Target Consumers, Not Just Technology," *Public Utilities Fortnightly*, January 15, 1995, pp. 23-26.

³⁴ Steven Nadel, Anna Shipley and R. Neal Elliott, The Technical, Economic and Achievable Potential for Energy-Efficiency in the U.S. – A Meta-Analysis of Recent Studies, Proceedings of the 2004 ACEEE Summer Study on Energy Efficiency in Buildings, American Council for an Energy-Efficient Economy. Available at: <http://www.fypower.org/pdf/ACEEEstudy.pdf>.

1 represents a high risk to the reliability of service to the consumers of New
2 York.

3 As I mentioned before, energy efficiency measures do not offer the
4 operational flexibility or the ability to access different remote sources of
5 energy or ancillary services. Finally, the durability of the impacts of
6 energy efficiency programs, known as persistence, has always been a
7 source of concern to program evaluators and resource planners. This is
8 particularly true for the programs proposed by Mr. Spellman, which rely
9 on energy efficient lighting and space conditioning technologies that are
10 relatively easy to impair by changes of tenancy and/or space remodeling.
11 I will revisit these three irreconcilable differences in my rebuttal of the
12 many flawed assumptions made by Mr. Spellman in his estimation of
13 potential energy savings.

14 **D. The NYRI project should not be evaluated solely by comparing**
15 **the project's estimated annual revenue requirement with the**
16 **estimated generation production cost savings that it will make**
17 **possible.**

18 **Q DR. LESSER, DO YOU CONSIDER YOURSELF AN EXPERT IN COST-**
19 **BENEFIT ANALYSIS?**

20 **A** Yes. I have specific expertise in applied cost-benefit analysis
21 ("CBA" or "C/B analysis"). First, I studied the theory and application of
22 cost-benefit analysis as part of my doctoral program in economics at the

1 University of Washington, and my doctoral dissertation was an exercise in
2 applied cost-benefit analysis. Second, I have published scholarly articles
3 on aspects of cost-benefit analysis. Third, I have previously provided
4 expert testimony on CBA studies I have performed. For example, on
5 behalf of the New Jersey Board of Public Utilities, I testified on the costs
6 and benefits of a proposed (and subsequently withdrawn) merger
7 between Exelon Corporation and Public Service Enterprise Group. I also
8 testified on behalf of the Electric Power Supply Association (EPSA)
9 regarding a cost-benefit analysis prepared by the MISO Independent
10 Market Monitor with respect to implementing wholesale energy price
11 mitigation measures in what are called Broad Constrained Areas. And, I
12 testified on behalf of Dogwood Energy, LLC regarding the costs and
13 benefits of Aquila Corporation joining the Midwest Independent System
14 Operator or the Southwest Power Pool.

15 **Q DR. LESSER, GIVEN YOUR EXPERTISE IN COST-BENEFIT**
16 **ANALYSIS, IS IT APPROPRIATE TO BASE APPROVAL OF THE NYRI**
17 **PROJECT BASED SOLELY ON A COMPARISON OF THE NYRI**
18 **PROJECT'S ESTIMATED COST AND THE ESTIMATED**
19 **PRODUCTION COST SAVINGS THAT IT WILL PROVIDE?**

20 **A** No. First, it is unlikely that market-based transmission system
21 investments will secure funding because the regional price differences
22 such investments are intended to exploit will decrease after such projects

1 are built. Similarly, regulated transmission projects are unlikely to pass
2 narrow cost-benefit tests based solely on production cost savings
3 compared with revenue requirements. Third, even if a transmission
4 project like NYRI does pass such a narrow cost-benefit test, such projects
5 will still be evaluated based on broader non-price siting issues. It is
6 inconsistent to require any proposed transmission project to pass a narrow
7 cost-benefit test and not impose non-price public policy costs (e.g.,
8 environmental impacts), but at the same time not consider public policy
9 benefits, such as increased energy resource diversity, reduced greenhouse
10 gas emissions, and helping the state meet its RPS requirement. Therefore,
11 to the extent that all transmission project siting reviews include
12 evaluations of public policy costs as well as estimated production cost
13 savings, it is only reasonable that the non-price policy benefits such
14 projects provide all be considered.

15 **Q DR. LESSER, CAN THE STATE'S POLICY GOALS BE EVALUATED IN**
16 **A COST-BENEFIT FRAMEWORK?**

17 **A** In theory, they can be. However, in practice they are not. To my
18 knowledge, meeting the state's 25% RPS mandate, reducing greenhouse
19 gas emissions as required under RGGI, and increasing resource diversity
20 are not state policy goals that have been developed based on strict cost-
21 benefit accounting. Whereas the costs of such public policy goals can be

1 measured, it is extremely difficult to measure the benefits of such goals
2 with any sense of accuracy.

3 Moreover, such goals are typically imposed because they do not
4 meet narrow cost-benefit criteria. For example, wind and solar generation
5 are typically more costly and less reliable (because the sun doesn't shine at
6 night and the wind doesn't always blow) than fossil-fuel generation. If
7 wind and solar resources were less costly and provided the same
8 availability as fossil-fuel generation, there would be no need for a RPS
9 mandate, since the least-cost solution would to be build renewable
10 generation in any case.

11 Similarly, gas-fired generation facilities have been proposed and
12 been built in New York State because other types of generation are less
13 acceptable from a public policy standpoint. Given concerns about
14 greenhouse gas emissions, and, given existing state and federal air
15 pollution regulations. Natural gas is a likely choice of fuel. However,
16 building new gas-fired generation, as several NYDPS witnesses
17 recommend, will exacerbate the existing over-reliance on gas-fired
18 generation. As the NYISO Transmission White Paper states in regard to
19 SENY,

20 "Over two-thirds of the MWh produced in this region are
21 subject to significant fuel price volatility. Transmission can

1 provide significant fuel diversity benefits to this region by
2 providing access to non-gas-fired resources located
3 elsewhere.”³⁵

4 If a more diverse resource portfolio were also the least-cost
5 alternative, again, there would be no need for specific policy goals to
6 achieve greater resource diversity. Instead, that energy resource diversity
7 would occur in any case.

8 Finally, requirements to reduce greenhouse gas emissions and the
9 state’s participation in RGGI are clearly not based on cost-benefit tests.
10 The benefits, in terms of reduced climate change, to New York from
11 reducing in-state greenhouse gas emissions will be *de minimis*; global
12 climate change is a global issue. Requiring electric generating plants to
13 purchase carbon offsets necessarily increase overall generating costs and
14 the prices New York ratepayers pay for their electricity. Yet, state policy
15 makers believe that reducing greenhouse gas emissions is an important
16 policy goal. It makes no sense to require a transmission project like NYRI
17 to meet a cost-benefit test based solely on production cost savings when
18 the project will also help the state achieve broader public policy goals.

19 Finally, as the NYISO Transmission White Paper also states,

20 “While congestion and energy price differentials can drive
21 investment, they may be insufficient to support the

³⁵ NYISO Transmission White Paper, at 4-5.

1 development of a transmission project on market price
2 differentials alone. Intra-pool point-to-point merchant
3 transmission projects have failed to develop due in part to
4 the uncertainties concerning price differentials after the
5 construction of a project. Most projects will destroy the
6 spread they are intended to capture by reducing
7 congestion.³⁶

8 This means that it is doubtful any new transmission project will ever pass
9 a cost-benefit test solely based on production cost savings. That is why
10 transmission is viewed as a “public good,” much like the Interstate
11 Highway system provides benefits to everyone.

12 **Q ARE MERCHANT TRANSMISSION PROJECTS, I.E., THOSE THAT**
13 **ARE FUNDED BY TRANSMISSION SYSTEM DEVELOPERS**
14 **THEMSELVES, REQUIRED TO PASS A COST-BENEFIT TEST FOR**
15 **NYISO APPROVAL?**

16 **A** No. However, such projects must still complete all of the required
17 interconnection studies to determine their impact on the NYISO system.

18 **Q DR. LESSER, IN THE CURRENT FINANCIAL ENVIRONMENT, IS IT**
19 **LIKELY THAT MERCHANT TRANSMISSION PROJECTS WILL BE**
20 **FINANCED AND BUILT?**

21 **A** I think it highly unlikely that merchant transmission projects will
22 be independently financed in the current financial environment, for a
23 number of reasons. First, the state of flux in the electric industry,
24 including proposals to re-regulate the industry, evolving transmission

³⁶ NYISO Transmission White Paper, at 4-8.

1 market designs, and the potential for new environmental regulations,
2 introduce significant regulatory uncertainty for transmission projects,
3 which typically have long economic lives. Second, as NYISO itself has
4 pointed out in its Transmission White Paper and discussed previously,
5 most transmission projects, by reducing congestion will eliminate the
6 price spread on which their economic justification is based, destroying the
7 economic rationale for independently financing such investments in the
8 first place. That, in fact, is common to all public goods: markets supply
9 too little of them.

10 **Q HAVE ANY OF THE REGIONAL TRANSMISSION OWNERS IN**
11 **NYISO (RTOS) PROPOSED TRANSMISSION PROJECTS THAT**
12 **WOULD PROVIDE SIMILAR PRODUCTION COST SAVINGS AND**
13 **PUBLIC POLICY BENEFITS AS THE NYRI PROJECT?**

14 **A** To our knowledge, none of the other RTOs have submitted any
15 such projects to NYISO.

16 **Q WILL THE NYRI PROJECT RESULT IN ANY PRODUCTION COST**
17 **SAVINGS?**

18 **A** Yes. We prepared an independent analysis of projected production
19 cost savings with the NYRI project. We estimate those savings to be \$191
20 million (2006\$) in 2012, when the project is assumed to be in service. The
21 savings increase to \$197 million (2006\$) in 2015, and then increase
22 significantly to \$315 million (2006\$) by 2018. Thus, whereas the estimated

1 production cost savings are not greater than the project's anticipated
2 annual revenue requirement in the first few years, we estimate the
3 production cost savings will be greater than the revenue requirement by
4 2018. The reason for this is that NYRI will create significant economic
5 incentives to build new renewable and gas-fired generating facilities in
6 UPNY by providing a new transmission conduit to SENY. Thus, in
7 addition to helping the state meet its energy policy goals, we find that
8 NYRI will provide a net reduction in energy costs by the year 2018.

9 **Q IS THE NYPSC REQUIRED TO BASE APPROVAL OR DISAPPROVAL**
10 **OF THE NYRI PROJECT SOLELY ON THE BASIS OF PRODUCTION**
11 **COST SAVINGS?**

12 **A** We assume the NYPSC takes into account public policy goals when
13 determining whether to grant approvals, as well as non-monetary issues
14 such as environmental impacts.

15 **Q DO YOU RECOMMEND THE NYPSC GRANT A CERTIFICATE OF**
16 **PUBLIC NEED AND CONVEYANCE TO THE NYRI PROJECT?**

17 **A** Yes. First, it is unlikely that any merchant transmission projects
18 linking UPNY to SENY will be built, especially in the current financial
19 environment. Second, there are no other planned transmission projects
20 that will enable the new renewable generation that will be needed to meet
21 the state's RPS requirement and reduce greenhouse gas emissions, as

1 required by the state's participation in RGGI. Nor are there any other
2 planned transmission projects that will allow for increased energy
3 resource diversity, which is another state policy goal.

4 The alternatives recommended by the NYDPS consist of new gas-
5 fired generation, which will reduce energy resource diversity, or
6 reconfiguring an existing NYPA circuit into a DC line, even though NYPA
7 itself states it has no plans to develop that project. The alternatives
8 recommended by CARI are: (1) an underground, route for the NYRI
9 project that will cost significantly more but have a lower capacity to wheel
10 power, and (2) installing energy efficiency measures in SENY based on a
11 utterly flawed analysis that also ignores the reliability benefits of
12 transmission investments and is based on untenable assumptions.

13 NYRI will help the state meet its public policy goals. It will
14 improve development of wind and other renewable generation in upstate
15 New York. It will help reduce existing transmission constraints and allow
16 for lower-cost generation in UPNY to more easily meet growing demand
17 in SENY, thus lowering New York ratepayers' electric bills. NYRI will also
18 encourage greater energy resource diversity and help to reduce
19 greenhouse gas emissions. There are no other transmission projects in the
20 NYISO queue that will provide these benefits. Nor will any of the

1 generation alternatives proposed by NYDPS staff, as those proposed
2 projects are all gas-fired.

3 **III. THE NYRI PROJECT WILL HELP THE STATE MEET ITS ENERGY**
4 **POLICY GOALS**

5 **A. Transmission system investments like NYRI are a public good**
6 **that will help the state meet its public policy goals and promote**
7 **development of lower-cost generation in UPNY.**

8 **Q CAN A TRANSMISSION SYSTEM INVESTMENT PROVIDE**
9 **BENEFITS THAT OUTWEIGH ITS COSTS, BUT FOR WHICH SUCH**
10 **BENEFITS MAY NOT BE DIRECTLY CAPTURED BY THE OWNERS?**

11 **A** Yes. One of the key benefits that high-voltage transmission
12 provides is to reduce the costs of providing electricity to ratepayers. It
13 does so in two ways. First, by connecting local consumers with distant
14 and geographically diverse generating resources, transmission increases
15 access to lower cost generating resources. Moreover, by interconnecting
16 many generators, transmission increases system reliability for all
17 consumers, or alternatively, allows for a chosen level of reliability to be
18 provided at a lower cost than would otherwise be possible. The NYISO
19 Transmission White Paper states that,

20 The real value of transmission is in enabling and improving
21 competitive markets for generation, particularly when the
22 strategic value and benefit far outweighs the cost of the
23 transmission itself. The premise is that transmission is a
24 public good, not a competitive product. For example, the
25 interstate highway system has provided immense benefits to

1 consumers in the form of increased competition for all sorts
2 of goods and services, benefits universally acknowledged to
3 exceed the cost of building the interstate system. Likewise,
4 transmission should be allowed to provide benefits in the
5 form of enhanced competition for energy and capacity
6 generation services.³⁷

7 In addition to providing enhanced competition, in the case of New York,
8 new transmission investment is required if development of new
9 renewable generating resources, which under the state's RPS are required
10 to provide 25% of all electric generation in 2013, just four years from now,
11 and, under Governor Patterson's recently announced goal, 30% by 2015.

12 **Q CAN YOU EXPLAIN WHAT YOU MEAN BY A PUBLIC GOOD?**

13 **A** Yes. Public goods have several general characteristics. The two
14 most important are called *nonexclusivity* and *nonrivalry*. Nonexclusivity
15 just means that providing the good for one provides it for everybody.
16 Central Park in Manhattan is a public good; anyone can go walk through it
17 and enjoy the park. The interstate highway system, as the NYISO White
18 Paper pointed out, is another. Anyone is free to drive on an interstate
19 highway.³⁸

20 The electric transmission grid has many characteristics of a public
21 good, as do local distribution networks. For example, if the transmission

³⁷ NYISO Transmission White Paper pp.4-8 – 4-9, fn. omitted.

³⁸ Toll roads like the New York State Thruway are different, since you have to pay to use them.

1 system is upgraded, everyone benefits from the improved reliability;
2 customer A's reliability will not be improved while customer B next door's
3 reliability remains the same. Furthermore, by providing greater access to
4 competitively priced generation, all customers benefit, for the same reason
5 that unfettered trade between two countries benefits both.

6 **Q WHAT EVIDENCE DO YOU HAVE THAT BUILDING NEW**
7 **GENERATION IN UPNY COSTS LESS THAT BUILDING NEW**
8 **GENERATION IN SENY AND NEW YORK CITY?**

9 A In 2007, NYISO commissioned NERA Economic Consulting to
10 estimate the costs of building new gas-fired peaking generators in
11 different regions of the state.³⁹ These cost estimates form the basis of the
12 installed capacity ("ICAP") demand curves used by NYISO to determine
13 how much all generators are paid for providing capacity resources.
14 Having sufficient generating capacity, including a capacity reserve above
15 projected peak loads is necessary to ensure overall system reliability.

16 NYISO divides the state into three zones for ICAP markets: New
17 York City, Long Island, and "Rest-of-State." New York City and Long
18 Island have their own separate ICAP markets because existing

³⁹ NERA, "Independent Study to Establish Parameters of the ICAP Demand Curve for the New York Independent System Operator," August 15, 2007 (NERA Report").

Available at:

http://www.nyiso.com/public/webdocs/committees/bic_icapwg/meeting_materials/2007-08-24/ICAPWG_Demand_Curve_Study_Report_final_82407.pdf

1 transmission constraints into those two areas requires that much of the
2 generating capacity needed to meet peak demand be local. For example,
3 80% of the generation needed to meet peak demand in New York City
4 must be physically located in the city. Similarly, 99% of the generation
5 needed to meet peak demand in Long Island must be located there.

6 The NERA study evaluated the cost of building new generating
7 units in UPNY, the Capital Region, the Lower Hudson Valley, New York
8 City, and Long Island. For example, NERA estimated that labor costs
9 associated with constructing new generating plants in New York City
10 would be almost double those in UPNY.⁴⁰ In total, NERA estimated that
11 constructing a generating plant in NYC or on Long Island would cost
12 almost 40% more than building the same plant in UPNY.⁴¹ NERA also
13 estimated property taxes to be only one-fourth as high in UPNY as in New
14 York City. Similarly, the cost to lease sites is far lower in UPNY than in
15 New York City or Long Island. Moreover, labor and capital costs to
16 maintain those same generating plants were also less in UPNY. For a 45
17 MW generating plant, the difference in capital costs alone amounted to
18 about \$45 million, or about \$1,000/kW.

⁴⁰ NERA Report, at 75.

⁴¹ Id.

1 Q IF UPSTATE GENERATION COSTS ARE LOWER THAN
2 DOWNSTATE COSTS, WHY DON'T DEVELOPERS FINANCE NEW
3 TRANSMISSION PROJECTS THEMSELVES, RATHER THAN
4 REQUEST RATE-BASE TREATMENT FOR THOSE PROJECTS?

5 A The problem is that, by adding new transmission capacity, the price
6 differentials will often disappear because of the transmission investment
7 itself. This was pointed out recently by NYISO in its Transmission White
8 Paper:

9 While congestion and energy price differentials can drive
10 investment, they may be insufficient to support the
11 development of a transmission project on market price
12 differentials alone. Intra-pool point-to-point merchant
13 transmission projects have failed to develop due in part to
14 the uncertainties concerning price differentials after the
15 construction of a project. Most projects will destroy the
16 spread they are intended to capture by reducing
17 congestion.⁴²

18 This is one reason that private funding of transmission projects is rare. If
19 the transmission projects are built and, as a result, eliminate the price
20 differentials they were predicated upon, then those projects will have no
21 market value. No investors will want to fund such investments.

22 For example, the proposed Empire State Transmission Project, a
23 2000 MW HVDC line that would have run from just outside Albany, New
24 York, to New York City, was cancelled because no subscribers signed up

⁴² NYISO Transmission White Paper, p.4-8 (emph. added).

1 for the line, even though it was recognized that the line would allow
2 lower-cost power from upstate New York to be transferred downstate,
3 where electric prices are higher. We are not aware of any other planned
4 merchant transmission projects linking upstate New York to downstate
5 markets.

6 **Q DID THE NYISO TRANSMISSION WHITE PAPER ALSO ADDRESS**
7 **ISSUES AFFECTING TRANSMISSION LINES NEEDED FOR PUBLIC**
8 **POLICY REASONS?**

9 **A**Yes. The White Paper recognizes that the existing NYISO
10 transmission planning regime is inconsistent with state energy policy
11 goals. Specifically,

12 “The history and characteristics of the New York bulk power
13 transmission system present additional drivers for (as well
14 as obstacles to) transmission investment. Importantly,
15 several of these drivers reflect New York’s policy choices for
16 the future of its electric system. These policy choices
17 effectively create new criteria and objectives for transmission
18 planning in New York. It is increasingly clear, however, that
19 the development of these new environmental and public
20 policy mandates did not fully take into account the existing
21 transmission planning framework.”⁴³

22 The Transmission White Paper also states that,

23 “transmission upgrades driven by environmental and
24 public policy reasons are typically not needed to ‘keep the
25 lights on’ and will likely fail traditional cost-benefit analyses
26 that focus on production costs (LMPs) and congestion/uplift
27 costs. For example, transmission projects needed to develop

⁴³ Id., at 4-1 (emph. added).

1 renewable resources are often uneconomic because the
2 resources are in remote locations, far from load centers and
3 any other significant electric infrastructure. To date, no
4 transmission planning regime (reliability or economic)
5 explicitly includes public policy objectives as essential goals
6 for transmission planning. It is becoming harder to reconcile
7 existing transmission planning frameworks with various
8 public policy mandates being enacted by state (and possibly
9 federal) policymakers.”⁴⁴

10 New York State has enacted just the sort of public policy mandates that
11 the white paper references. Despite that, however, intervenors, including
12 NYDPS witnesses, have based large portions of their objections to the
13 NYRI project on narrow cost-benefit analyses that compare the estimated
14 benefits in the form of production cost savings the project will create with
15 the project’s cost, completely ignoring the public policy benefits the NYRI
16 project will provide.

17 **Q WHAT ARE THE PUBLIC POLICY GOALS THAT THE NYRI PROJECT**
18 **WILL PROMOTE?**

19 **A** NYRI will promote three interrelated state policy goals. These are:
20 (1) increasing renewable generation, most likely wind generation, through
21 the state’s RPS goal of meeting 25% of the state’s electric energy
22 requirements with renewable resources by the year 2013 and, as set out by
23 Governor Patterson in his “State of the State” address on January 8, 2009,
24 meeting 30% of the state’s electric energy requirements with renewable

⁴⁴ Id., at 4-2.

1 resources by the year 2015; (2) reducing greenhouse gas emissions from
2 fossil-fuel generating plants, reflected by the state's membership in the
3 Regional Greenhouse Gas Initiative (RGGI); and (3) increasing energy
4 resource diversity, which was set out as a policy goal in the 2002 State
5 Energy Plan and, most recently in the governor's aforementioned "State of
6 the State" address.

7 **Q WILL THE NYRI PROJECT HELP THE STATE MEET THESE PUBLIC**
8 **POLICY GOALS?**

9 A Yes. NYRI will help foster development of renewable resources
10 upstate and improve the ability to wheel generation from such renewable
11 resources to downstate utilities and consumers.

12 **Q WHY IS ADDITIONAL TRANSMISSION INFRASTRUCTURE**
13 **NEEDED TO MEET THE STATE'S RPS GOAL?**

14 A As the NYISO Transmission White Paper explains,
15 "Building wind plants alone, however, will not achieve
16 compliance with the State's RPS targets. Many of the
17 proposed wind plants are seeking to interconnect in
18 concentrated clusters located in the northern and western
19 regions of the State. These regions' existing transmission
20 network was not designed to deliver all the potential wind
21 plant output to the loads in the southeastern portion of the
22 State. NYSERDA's long-term contracts only provide revenue
23 to wind plants that generate energy that is ultimately used to
24 meet New York's retail load. Without investment in
25 additional transmission infrastructure to balance and move
26 wind energy to the load centers in the southeastern regions

1 of the state, it may become difficult for New York to meet its
2 state RPS targets.”⁴⁵

3 Similarly, an October 2008 White Paper prepared for the NYISO on
4 fuel diversity (attached as Exhibit No. JAL/JNP-6) states,

5 “Without enhancements to the transmission grid in the state
6 that will allow greater transfers of power from north to
7 south, the wind resources may do little to reduce energy
8 prices and diversify the downstate mix. Moreover, without
9 transmission enhancements enabling greater delivery of
10 wind, wind turbines may be required to dispatch down even
11 when the wind is blowing because the grid would otherwise
12 become overloaded with too much power for the local
13 region to absorb.”⁴⁶

14 **Q PLEASE EXPLAIN WHAT IS MEANT BY THE STATEMENT THAT**
15 **“WIND TURBINES MAY BE REQUIRED TO DISPATCH DOWN.”**

16 **A** NYISO has stated that thousands of MW of new wind generation
17 will need to be built to meet the state’s RPS requirement. Without enough
18 transmission capacity, however, all of this wind generation would
19 overload the existing transmission system. It is as if one is trying to drain
20 a bathtub when the faucets are running on full and the drain is partially
21 clogged. There are only two solutions to the problem: unplug the drain
22 (i.e., increase transmission deliverability or turn down the faucets (i.e.,
23 dispatch down wind turbines.) Without new transmission capacity, the

⁴⁵ Id., at 4-3.

⁴⁶ NYISO, “Fuel Diversity in the New York Electricity Market,” White Paper, October 2008 (“NYISO Fuel Diversity White Paper”), at 4-9 (fn. omitted).

1 NYISO system will be incapable of delivering all of the wind generation.
2 This means that many wind generators will be told to reduce their output
3 or, at times, even shut down completely so as not to overload the
4 transmission system.

5 **Q WILL THE NYRI PROJECT ELIMINATE THIS ISSUE?**

6 **A** The NYRI project will help by increasing transmission capacity
7 from UPNY to SENY, but clearly will not solve every transmission
8 capacity problem in the state. Other transmission upgrades are needed to
9 address those issues.

10 As we discuss in the next section of our testimony, NYDPS
11 witnesses appear to be applying a standard that requires the NYRI project
12 be rejected precisely because it does not solve all of these long-standing
13 transmission constraints. This is an impossible standard for any
14 transmission development to meet.

15 **B. The NYDPS is using NYISO's existing transmission constraints**
16 **to impose an impossible hurdle on transmission system**
17 **infrastructure development, including NYRI.**

18 **Q DOES NYDPS WITNESS SCHROM AGREE THAT THE NYRI**
19 **PROJECT WILL INCREASE THE ABILITY OF RENEWABLES TO**
20 **DELIVER THEIR GENERATION AS YOU HAVE DISCUSSED?**

21 **A** No. In his testimony, Mr. Schrom states

22 "There are currently no proposed renewable energy projects
23 near the proposed NYRI facility or the transmission system

1 next to the interconnect at Edic. Most of the existing and
2 proposed renewable generation is located to the extreme
3 north and western part of the state and is already
4 experiencing bottled capacity problems. To deliver the
5 capacity to NYRI's proposed facility would require
6 additional transmission lines to be constructed from the
7 renewable generators to the Edic Station. There is currently
8 insufficient transmission capacity to make those deliveries to
9 NYRI's proposed facility."

10 [Schrom Testimony, at 18, line 13 – 19, line 2]. Although Mr.
11 Schrom's statement is not entirely correct – there is significant wind
12 capacity north of Edic – it reveals one of the most significant
13 planning and policy limitations of NYISO itself. Specifically, unlike
14 other RTOs, until last year, NYISO did not require the transmission
15 system to be able to absorb all of the generation supplied by new
16 generators interconnecting to the NYISO transmission grid.

17
18
19 **Q WHY IS THIS A PROBLEM?**

20 A As explained in an October 2008 Whitepaper prepared by NYISO
21 on integrating wind resources into the NYISO system,

22 "Proposed generation projects are required to comply with
23 the applicable NYISO interconnection procedures. The
24 interconnection study process identifies any adverse
25 reliability impacts of the proposed project and identifies
26 facilities required in order for the project to interconnect in a
27 manner consistent with applicable reliability standards. The

1 interconnection study process assesses the reliability of the
2 system while providing the project access to the
3 transmission system; however, it does not assure delivery
4 service across the network.”⁴⁷

5 The NYISO Wind Integration White Paper goes on to say that this “may
6 lead to sub-optimal reductions of wind plant output during periods of
7 transmission limitations.”⁴⁸

8 In other words, while a new generator may be able to
9 connect to the NYISO transmission system, it may be forced to
10 reduce the amount of generation, even if the marginal cost of that
11 generation is low, or zero in the case of wind energy, because there
12 is too little transmission to deliver the power generated to where it
13 is needed. If there is too little transmission capacity, a generator can
14 be required to operate at a diminished level, or even be forced to
15 shut down, because there is too little transmission capacity
16 available to allow the generator to operate. As Mr. Schrom points
17 out, this is already occurring today in NYISO, and is what he refers
18 to as “bottled capacity.”

19 **Q HOW DOES THIS AFFECT EXISTING WIND GENERATORS?**

20 **A** The NYISO Fuel Diversity White Paper states that,

⁴⁷ NYISO, “Integration of Wind into System Dispatch,” White Paper, October 2008 (“NYISO Wind Integration White Paper”), at 2-4 (fn. omitted).

⁴⁸ Id.

1 “Typically, the NYISO cannot fully dispatch all low-priced
2 power production facilities (such as wind) in the upstate
3 region to meet downstate loads because of electrical
4 overloading of the transmission system that would occur
5 with the north-to south flows on the system. As a result,
6 more expensive plants (gas-fired peaking plants, oil plants)
7 must be physically located downstate, and then operated
8 locally to keep the lights on in New York City and Long
9 Island.”⁴⁹

10 Thus, today, New York consumers, especially in New York City and Long
11 Island, pay more for their electricity than necessary, because lower cost
12 generation in UPNY cannot always be delivered to SENY. As a result,
13 higher-cost generation must be dispatched in New York City and Long
14 Island. That raises costs to consumers.

15 **Q WOULD THE UNDERGROUND TRANSMISSION ALTERNATIVE**
16 **PROPOSED BY CARI WITNESS LANZALOTTA SOLVE THE**
17 **“BOTTLED CAPACITY” ISSUE FOR WIND RESOURCES LOCATED**
18 **IN THE NORTHERN AND WESTERN PARTS OF THE STATE?**

19 **A No.**

20 **Q WOULD DEVELOPING THE NYPA TRANSMISSION ALTERNATIVE**
21 **AS RECOMMENDED BY MR. SCHROM SOLVE THE “BOTTLED**
22 **CAPACITY” ISSUE FOR WIND RESOURCES LOCATED IN THE**
23 **NORTHERN AND WESTERN PARTS OF THE STATE?**

24 **A No.**

25 **Q DOES NYISO ITSELF BELIEVE THAT THE STATE’S RPS**
26 **REQUIREMENT CAN BE MET WITHOUT BUILDING ADDITIONAL**
27 **TRANSMISSION INFRASTRUCTURE THAT LINKS UPNY TO SENY?**

⁴⁹ NYISO Fuel Diversity White Paper, at 1-2.

1 A No. The NYISO Wind Integration White Paper states that,

2 “Just meeting New York State’s 25% renewable energy
3 mandate may require as much as 4,000 MW of wind capacity
4 to be built in New York ... With wind plants continuing to
5 locate in the northern and western portions of the state it
6 will become difficult to meet state RPS targets without
7 additional transmission infrastructure”⁵⁰

8 **Q ARE OTHER REGIONS OF THE COUNTRY ADDRESSING THESE**
9 **SAME SORTS OF TRANSMISSION INFRASTRUCTURE ISSUES?**

10 A Yes. As the NYISO Wind Integration White Paper states, several
11 states have embarked on large public policy initiatives to ensure that
12 renewable generation can be integrated into their power systems. For
13 example, the State of California established a Renewable Energy
14 Transmission Initiative (RETI) in order to identify the necessary
15 transmission projects required to facilitate the state’s renewable energy
16 goals. Just in December 2008, the California Public Utilities Commission
17 approved the Sunrise Power Link, which is designed to enable
18 transmission of renewable generation from the Imperial Valley into the
19 San Diego area.

20 Similarly, in July 2008, the Public Utility Commission of Texas
21 awarded contracts worth almost \$5 billion to fund a series of transmission
22 projects to deliver wind energy from areas known as “Competitive

⁵⁰ Id., at 5-1 (fn. omitted).

1 Renewable Energy Zones” (CREZ). CREZ are “zones that can develop
2 large amounts of energy from renewable resources in a cost effective and
3 environmentally benign manner.”⁵¹ The goal is to interconnect over 18,000
4 MW of wind generation. The NYISO Wind Integration White Paper also
5 notes that other such efforts are underway, including the Midwest
6 Independent Transmission System Operator, which is “coordinating
7 efforts to evaluate the transmission needed to support integration of 20%
8 wind generation within Minnesota, Wisconsin, Illinois and Iowa.”⁵²

9 **Q DOES NYISO HAVE ANY SIMILAR POLICY INITIATIVES**
10 **UNDERWAY?**

11 A No. Not only does NYISO have no such policy initiatives
12 underway, it has none planned. Thus, whereas NYISO itself admits that
13 new transmission infrastructure must be developed in order to meet the
14 state’s RPS goal, it does not even consider the existing transmission
15 infrastructure’s ability to deliver that renewable energy in its planning
16 process. Worse, the NYDPS, which is a state government entity and is
17 clearly aware of the state’s RPS goals, opposes the NYRI project even
18 though NYRI represents a key component of the transmission
19 infrastructure that is needed. In essence, NYDPS witness Schrom

⁵¹ Id. at 5-3.

⁵² Id.

1 recommends that NYRI be penalized for the NYISO's lack of adequate
2 transmission capacity. In other words, since there is too little transmission
3 capacity in NYISO to enable lower-cost generation in UPNY, including
4 renewable generation, to be dispatched efficiently, Mr. Schrom argues
5 there is no point in building NYRI, even if NYRI will add new
6 transmission capacity and, as such, address some of those existing
7 transmission constraints in NYISO.

8 Mr. Schrom essentially is imposing an almost insurmountable
9 economic hurdle and "Catch-22" on any proposed transmission
10 development in the state, including NYRI, designed to foster renewable
11 generation development and increased use of lower-cost generating
12 resources upstate. Accepting his logic means that transmission
13 infrastructure like NYRI will not be built to meet the state's renewable
14 generation requirements because there are other constraints on the NYISO
15 system that prevent existing renewable generation from being fully
16 dispatched, much less an additional 4,000 MW of renewable generation.
17 Of course, new renewable generating plants will not be built or financed if
18 the additional transmission infrastructure needed to sell those plants'
19 generation is not allowed to be developed. Mr. Schrom's "Catch-22"
20 approach is clearly wholly inconsistent with state energy policy that

1 wishes to promote renewable generation, reduced greenhouse gas
2 emissions and greater energy resource diversity.

3 **Q DR. LESSER, YOU HAVE SIGNIFICANT EXPERIENCE IN ENERGY**
4 **POLICY DEVELOPMENT BASED ON YOUR TENURE AT THE**
5 **WASHINGTON STATE ENERGY OFFICE AND, MORE RECENTLY,**
6 **AS THE DIRECTOR OF PLANNING AT THE VERMONT**
7 **DEPARTMENT OF PUBLIC SERVICE. DO YOU CONSIDER THIS**
8 **“CATCH-22” SITUATION THAT NYDPS WITNESS SCHROM IS**
9 **IMPOSING TO BE GOOD PUBLIC POLICY?**

10 **A** Of course not. Not only do such “Catch-22” situations undermine
11 infrastructure development – even when NYISO itself recognizes the need
12 for such development – it also increases costs, as investors will require
13 greater compensation for the additional regulatory uncertainty in the form
14 of higher expected returns.

15 **Q IGNORING THE FACT THAT NYPA WITNESS O’CONNOR HAS**
16 **TESTIFIED THAT THERE ARE NO CURRENT PLANS TO BUILD THE**
17 **TRANSMISSION PROJECT PREFERRED BY NYDPS WITNESS**
18 **SCHROM, WOULD THAT PROJECT “SOLVE” THE “BOTTLED**
19 **CAPACITY” PROBLEM?**

20 **A** No. Moreover, it is odd that Mr. Schrom concludes the NYPA
21 project is preferable to the NYRI project without having performed or
22 even reviewed any studies of that project, as he admits in his response to
23 Interrogatory NYRI-56 (attached as Exhibit No. JAL/JNP-7).

1 **Q WOULD THE ALL-UNDERGROUND ALTERNATIVE LINE**
2 **PROPOSED BY CARI WITNESS LANZALOTTA “SOLVE” THE**
3 **“BOTTLED CAPACITY” PROBLEM?**

4 **A** No. In fact, given that Mr. Lanzalotta’s all-underground alternative
5 would have a lower capacity than the NYRI project, it would provide
6 access for even less Upstate generation.

7 **C. NYRI will enable greater energy resource diversity in the state by**
8 **allowing more generation that is not gas-fired to be developed.**

9 **Q WHY IS ENERGY RESOURCE DIVERSITY IMPORTANT?**

10 **A** The reason energy resource diversity is important is because the
11 state is already highly exposed to volatile fossil-fuel prices. As the NYISO
12 Transmission White Paper notes, natural gas-fired and oil-fired generating
13 resources are “on the margin” – and thus set market prices – about 90% of
14 all hours.⁵³ By increasing resource diversity, consumers in southern New
15 York, where the demand for electricity continues to grow, will not have to
16 rely as heavily on natural gas-fired and oil-fired generating resources nor
17 be as exposed to volatile natural gas prices.

18 **Q ARE THERE ANY OTHER REASONS TO DEVELOP NEW**
19 **GENERATING RESOURCES IN UPSTATE NEW YORK?**

20 **A** Yes. Although new gas pipeline capacity into the southern Hudson
21 Valley can be developed, prices are likely to be higher in the south than in

⁵³ Id.

1 northern NY, as was also recognized in the NYISO Fuel Diversity White
2 Paper. Building new gas-fired units in southern New York, as has been
3 recommended by several NYDPS witnesses, will further exacerbate the
4 region's reliance on gas-fired generation.

5 **Q WHAT DOES THE NYISO FUEL DIVERSITY WHITE PAPER STATE**
6 **ABOUT THE EFFECTS OF LIMITED FUEL DIVERSITY IN SENY?**

7 A The NYISO Fuel Diversity White Paper states that
8 "The comparatively limited downstate fuel diversity poses
9 certain risks for the New York City and Long Island areas.
10 For obvious reasons, the wholesale prices in these areas are
11 inextricably tied in the short run to price conditions in the
12 natural gas market. Without changes in the transmission
13 infrastructure allowing power from other fuel technologies
14 to become available to the downstate regions, prices will
15 continue to be shaped by relatively expensive fossil fuels in
16 the downstate area."⁵⁴

17 **Q WHAT OTHER FUEL TECHNOLOGIES IS THE NYISO FUEL**
18 **DIVERSITY WHITE PAPER MOST LIKELY REFERENCING?**

19 A The NYISO queue shows several large pumped-storage hydro
20 resources located upstate, which use low-cost off-peak generation to
21 provide high-value generation in peak hours. It is also possible that the
22 state's existing nuclear units may see their generation increased through
23 capacity uprates. And, of course, thousands of MWs of new wind
24 generation are in the NYISO queue and will need to be developed for the

⁵⁴ NYISO Fuel Diversity White Paper, at 3-6 (emph. added).

1 state to meet the RPS requirement. As NYISO itself states, new
2 transmission infrastructure will be required to ensure that power from
3 other fuel technologies located upstate can be delivered to meet growing
4 SENY demand.

5 **Q IN THEIR EVALUATION OF GENERATION ALTERNATIVES TO**
6 **NYRI, DID ANY NYDPS WITNESSES CONSIDER DEVELOPMENT**
7 **OF OTHER FUEL TECHNOLOGIES BESIDES NATURAL GAS?**

8 **A** No. NYDPS witnesses Gjonaj and Wheat, Schrom, de Waal
9 Malefyt, or Davis all either modeled or assumed gas-fired generating
10 plants as generation alternatives to NYRI.

11 **Q DID NYDPS WITNESSES GJONAJ AND WHEAT STATE THAT**
12 **BUILDING 1,200 MW OF NEW GAS-FIRED GENERATION IN SENY**
13 **OR NEW YORK CITY WOULD INCREASE CONSUMERS' EXPOSURE**
14 **TO VOLATILE NATURAL GAS PRICES?**

15 **A** Yes. In response to Interrogatory Request NYRI-58(f) (attached as
16 Exhibit No. JAL/JNP-8), witnesses Gjonaj and Wheat state that building
17 new gas-fired generation would increase consumers' exposure to volatile
18 natural gas prices.

19 **Q IS THAT INCREASED CONSUMER EXPOSURE TO VOLATILE**
20 **NATURAL GAS PRICES ADMITTED BY NYDPS WITNESSES**
21 **GJONAJ AND WHEAT CONSISTENT WITH STATE ENERGY**
22 **POLICY?**

1 A No. It is directly contrary to state energy policy, which calls for
2 greater energy resource diversity, not less. One of the goals of greater
3 energy resource diversity is to reduce exposure to volatile fuel prices.

4 **Q DID NYDPS WITNESS SCHROM STATE THAT BUILDING NEW**
5 **GAS-FIRED GENERATION WOULD INCREASE CONSUMERS'**
6 **EXPOSURE TO VOLATILE NATURAL GAS PRICES?**

7 A No. Instead, Mr. Schrom avoided answering a direct question
8 posed to him about the issue. Specifically, in response to Interrogatory
9 Request NYRI-54(c) (attached as Exhibit No. JAL/JNP-9), Mr. Schrom
10 stated that he had "not taken into account the affect [sic] of fuel process on
11 the cost of generation."

12 **Q WHAT DOES "THE AFFECT [SIC] OF FUEL PROCESS ON THE COST**
13 **OF GENERATION" MEAN?**

14 A It is not clear from Mr. Schrom's response. In general terms, the
15 cost of fossil-fuel generation is affected by both the average level of fuel
16 prices and the volatility of fuel prices. As volatility increases, it is possible
17 to hedge that volatility by signing long-term contracts at fixed prices or by
18 purchasing call options that are triggered at certain price levels. However,
19 as volatility increases, so does the cost of hedging against that volatility.
20 By building more gas-fired generating resources that increasingly set the
21 market price of power in most hours, consumer exposure to volatile gas

1 prices increases, as the NYISO Fuel Diversity White Paper states.
2 Reducing that exposure in the face of more natural gas-fired generation
3 would require greater use of hedging mechanisms, which always have a
4 net cost (insurance is never free, lest the insurer go out of business). Thus,
5 building additional natural gas-fired generation necessarily increases costs
6 to consumers, unless the State abandons its goal of greater energy
7 resource diversity, in which case no money would be spent to reduce such
8 exposure.

9 **D. NYISO's assumptions regarding the need for new investment to**
10 **maintain reliability are fraught with uncertainty.**

11 **Q IN ITS 2009 "RELIABILITY NEEDS ASSESSMENT" (2009 RNA), DOES**
12 **NYISO STATE THAT THERE IS NO NEED FOR NEW**
13 **TRANSMISSION SYSTEM INVESTMENT TO MEET RELIABILITY**
14 **STANDARDS THROUGH THE YEAR 2018?**

15 **A** Yes. The 2009 RNA states that, "the forecasted baseline system
16 meets applicable reliability criteria for the next 10 years, from 2009
17 through 2018, without any additional resource needs."⁵⁵

18 **Q JUST TO CLARIFY, HOWEVER, THE 2009 RNA DOES NOT**
19 **CONSIDER INVESTMENTS THAT MAY BE NEEDED TO FURTHER**
20 **STATE ENERGY POLICY GOALS, SUCH AS THE RPS. IS THAT**
21 **TRUE?**

⁵⁵ 2009 RNA, at i.

1 A Yes. NYISO witness Buechler stated in his testimony that NYISO
2 does not account for any public policy goals in its RNA process [Buechler
3 Testimony, at 27, lines 2-5].

4 **Q HOW DID NYISO DETERMINE THAT NO NEW INVESTMENT WAS**
5 **NEEDED TO MEET RELIABILITY STANDARDS THROUGH THE**
6 **YEAR 2018?**

7 A According to the 2009 RNA, there is no need for new reliability
8 investments because it assumes three things will happen with certainty:⁵⁶

- 9 1. 1,714 MW of new generation, including 800 MW of new wind
10 power, will be added by generation developers and fewer
11 retirements of older, inefficient generators;
- 12 2. The state will realize its policy goal of a 15% reduction in total
13 electric demand, known as the “15 x 15” energy efficiency portfolio
14 standard (“EEPS”). NYISO assumes this will provide a 5%
15 reduction in forecast peak loads by 2015, or 2,100 MW;
- 16 3. Increased registration of so-called “Special Case Resources”
17 (SCRs), from 761 MW in the 2008 RNA to 2,084 MW in the 2009
18 RNA. SCRs are contracts with firms that agree to reduce their
19 electricity use when asked by NYISO.

⁵⁶ Id., at i-ii.

1 **Q DOES NYISO RECOGNIZE ANY UNCERTAINTIES OR OTHER**
2 **ISSUES THAT COULD CHANGE ITS CONCLUSION ABOUT THE**
3 **LACK OF NEED FOR NEW INVESTMENT IN THE 2009 RNA?**

4 **A** Yes. NYISO discusses seven potential factors that could change its
5 conclusions. These include the 15x15 EEPS program not producing the
6 expected peak load reductions; higher load growth and extreme weather
7 that increases peak demand on hot summer days; compliance with new
8 environmental laws requiring reductions in emissions of oxides of
9 nitrogen, which could cause some generating units to shut down because
10 the required pollution control investments would not be economical;
11 increased greenhouse gas allowance prices resulting from the state's
12 continued participation in RGGI could lead to coal-plant shutdowns;
13 unexpected generating plant retirements, such as may occur if a
14 generating plant is unexpectedly faced with significant repair costs;
15 increased loads of 750 MW in the Lower Hudson Valley or in New York
16 City above the forecast. Clearly, there are numerous factors that may
17 change the NYISO's Base Case projection in the 2009 RNA regarding
18 reliability.

19 **Q DOES THE NYISO HAVE ANY CONTINGENCY PLANS TO**
20 **ADDRESS THESE ISSUES, SUCH AS IDENTIFIED PROJECTS THAT**
21 **ARE "WAITING IN THE WINGS" IN CASE OF CHANGING**
22 **CONDITIONS?**

1 A No. As NYISO states in its 2009 RNA,

2 “Should the NYISO determine that conditions have changed,
3 it will determine whether market-based solutions that are
4 currently progressing are sufficient to meet the resource
5 adequacy and system security needs of the New York power
6 grid. If not, the NYISO will address any newly identified
7 reliability need in the subsequent RNA or, if necessary, issue
8 a request for a Gap solution.”⁵⁷

9 In essence, NYISO’s contingency planning boils down to “monitoring” the
10 situation and then, if conditions change, beginning the process to acquire
11 a regulated solution.

12 **Q IS THERE ANYTHING WRONG WITH MONITORING THE SYSTEM**
13 **FOR CHANGES FROM THE BASE CASE.**

14 A Of course not. However, whereas monitoring is necessary, it may
15 not be sufficient. It is easy to tell if generators are suddenly retired, a new
16 law has been passed that requires environmental retrofits, or if a
17 nationwide carbon tax or cap-and-trade system is passed.

18 In some cases, however, it may not be easy to determine if there
19 has been a fundamental shift, such as changes in peak load growth. Load
20 growth is always volatile and load forecasts always change. It can be
21 difficult to determine when peak load growth has changed fundamentally
22 versus when it is being affected by random effects of weather and market

⁵⁷ Id., at iv.

1 prices. Thus, just as the NYISO's 2009 load forecast dropped from 2008, it
2 could just as easily increase again in 2010 or 2011. However, NYISO relies
3 solely on a point load forecast that does not account for the inherent
4 uncertainty of future load growth.

5 The problem with failing to address uncertainty regarding future
6 peak load growth is that, by relying almost exclusively on market-based
7 solutions, NYISO is presuming that such solutions will have no problems
8 obtaining the necessary funds for development. In the current capital
9 market, this is unlikely to be the case. Moreover, as NYISO Transmission
10 White Paper itself states,

11 "The CRPP's all-source nature, its preference for market
12 solutions, and the compression of the timeframe for
13 regulated backstop solutions make it less likely that
14 transmission will be chosen as a solution to address
15 reliability needs in New York."⁵⁸

16 Again, therefore, we have the specter of NYISO saying that new
17 transmission investment will be needed if the state is to meet its public
18 policy goals, while admitting that its own procedures make it unlikely
19 that market-based transmission will be built. Moreover, if market
20 solutions cannot obtain the necessary funding, one is inexorably left with
21 regulatory "Gap" solutions.

⁵⁸ NYISO Transmission White Paper, at 6-1.

1 **Q WHY IS A “WAIT AND SEE” APPROACH TO DETERMINE IF**
2 **MARKET SOLUTIONS WILL BE SUFFICIENT PROBLEMATIC?**

3 A The problem with a “wait and see” approach is best explained by
4 the previous quote from the NYISO Transmission White Paper: by the
5 time one discovers that market solutions may not work, there may be too
6 little time to develop transmission alternatives. Not only does that mean
7 that a regulated transmission alternative may not be forthcoming even if it
8 is the least-cost regulatory solution, but also that the other state policy
9 goals will not be realized.

10 Additionally, in an uncertain investment climate such as today’s,
11 relying on market solutions will be increasingly costly and speculative,
12 compared to regulatory solutions. Market projects may be delayed or
13 cancelled suddenly, such as the ill-fated Empire State transmission project,
14 because investors are afraid to commit. Yet, the 2009 RNA does not
15 account for this timing uncertainty.

16 **Q ARE YOU AWARE OF ANY GENERATING PROJECTS IN THE**
17 **CURRENT NYISO PROJECT QUEUE THAT HAVE BEEN DELAYED**
18 **OR CANCELLED OUTRIGHT?**

19 A Yes. Table 1 below (also attached as Exhibit No. JAL/JNP-10)
20 provides a list of generation projects in SENY (Zones H – K) that have
21 been withdrawn from the NYISO interconnection queue just since 2006.

1 As can be seen from the exhibit, these plants have a combined capacity of
 2 over 10,700 MW.⁵⁹ The list does not include projects whose on-line dates
 3 have slipped, in some cases by years, from their originally planned on-line
 4 dates.

5 **TABLE 1: Cancelled Generating Power Plants in SENY Since 2006**

Generation Projects Withdrawn from the NYISO Interconnection Queue in SENY (Zones H, I, J, and K) Since 2006										
Queue	Pos.	Owner/Developer	Project Name	Date of IR	SP (MW)	Type	Location County/State	Zone	Interconnection Point	Utility
	13	East Coast Power, LLC	Linden 7	3/25/99	100	ST-NG	Richmond, NY-NJ	J	Goethals 345kV	ConEd
	16	Oak Point Property, LLC	Oak Point Yard	4/15/99	500	CC-NG	Bronx, NY	J	Hell Gate/Bruckner 138kV	ConEd
	22	Calpine Eastern Corporation	Wawayanda Energy Center	6/10/99	500	CC-NG	Orange, NY	H	Coop Corn-Rock Tav Lines 345kV	NYPA
	24	Reliant Energy	Astoria Repowering-Phase 1	7/13/99	367	CC-NG	Queens, NY	J	Astoria 138kV	ConEd
	23	Calpine Eastern Corporation	Sullivan County Power Project	6/25/99	1080	CC-NG	Sullivan, NY	H	Coop Corn-Rock Tav Lines 345kV	NYPA
	29	Mirant	Bowline Point Unit 3	10/13/99	750	CC-NG	Rockland, NY	H	W. Haverstraw 345kV	ConEd
	35	Gotham Power Zerega, LLC	Gotham Power - Bronx I	1/12/00	79.9	CT-NG	Bronx, NY	J	Parkchester/Tremont 138kV	ConEd
	70	Reliant Energy	Astoria Repowering-Phase 2	8/18/00	173	CT-NG	Queens, NY	J	Astoria 138kV	ConEd
	93	In-City I, LLC	Cross Hudson Project	5/11/01	550	CC-NG	New York, NY-NJ	J	W49th Street 345kV	ConEd
	96	Calpine Eastern Corporation	CPN 3rd Turbine, Inc. (JFK)	5/29/01	45	CT-NG	Queens, NY	J	Jamaica 138kV	ConEd
	105	Calpine Eastern Corporation	Titan Smith Street	10/5/01	79.9	CT-NG	Kings, NY	J	Gowanus 138 or 345 kV	ConEd
	106	TransGas Energy, LLC	TransGas Energy	10/5/01	1100	CC-NG	Kings, NY	J	E13St, Rainey, or Farragut-345kV	ConEd
	110	PG&E/Liberty Gen. Co., LLC	Liberty Generation	2/4/02	400	CT-NG	Richmond, NY-NJ	J	Goethals 345kV	ConEd
	194	Calpine Energy Services	Bayonne	5/26/05	300	ST-NG	New York, NY	J	World Trade Center 138kV	ConEd
	200	Cavallo Power	Linden Power I	8/16/05	845	CC	NY, NY - Union, NJ	J	Goethal Substation	ConEd
	202	Liberty Generating Co.	130 MW Uprate	8/25/05	130	CT-NG	NY, NY - Union, NJ	J	Goethal 345kV	ConEd
	209	SUEZ Energy Generating NA, Inc	Nassau Generating	2/10/06	88	CT	Nassau, NY	K	Garden City Substation 138kV	LIPA
	226	Cavallo Power	Linden	9/8/06	1200	CC	NY, NY - Union, NJ	J	East 13th, West 49th	ConEd
	255	In-City, LLC	Cross Hudson	8/23/07	550	CC-NG	New York, NY-NJ	J	W49th Street 345kV	ConEd
	268	NRG Energy, Inc.	Arthur Kill	12/7/07	800	CC	New York, NY	J	Gowanus Substation	ConEd
	274	In City I, LLC	PSEG Fossil Bergen Unit 2	1/23/08	100	CC-NG	New York, NY-NJ	J	W49th Street 345kV	ConEd
	283	Riverbank Power Corporation	Riverbank Power J	3/3/08	1000	H	Queens, NY	J	Poletti Substation 345kV	NYPA
					10738					

6
 7 **Q WHY DO PROJECT DELAYS AND CANCELLATIONS MATTER?**

8 **A** Project delays and cancellations matter because they can affect the
 9 reliability of the NYISO system. Moreover, they call into question NYDPS
 10 witnesses' recommendations that gas-fired generating plants are preferred
 11 alternatives to NYRI for reliability purposes. If merchant generating
 12 projects are delayed or cancelled, either because of changing market

⁵⁹ This list does not include the 1,100 MW TransGas Energy, LLC gas-fired plant located in Kings, NY. Although this plant remains in the NYISO queue, it is our understanding that it is unlikely to be built.

1 conditions or difficulties in securing financing, then, as NYISO has stated,
2 the compressed time frame for selecting Gap projects limits transmission
3 alternatives. It is clear from Table 1 that many merchant projects suffer
4 this fate.

5 **Q HOW REASONABLE IS NYISO'S DEMAND RESPONSE**
6 **ASSUMPTION, SPECIFICALLY THAT OVER 2,000 MW OF PEAK**
7 **LOAD REDUCTIONS WILL BE ACHIEVED THROUGH THE STATE'S**
8 **15X15 EEPS PORTFOLIO REQUIREMENT?**

9 A NYISO's assumption, which itself assumes that only 30% of the
10 15x15 program savings will be achieved, may be overly aggressive, based
11 on the findings of a report prepared by the New York PSC - NYISO
12 Working Group VIII. This working group was charged with addressing
13 peak demand reductions in the 15x15 program through demand response
14 programs. The Working Group VIII Final Report, dated October 15, 2008,
15 states that

16 "a [demand response] provider may be willing to accept
17 prices below the market price at any one given point in time,
18 if over the longer term, the revenue derived from their
19 investment provide a sufficient return. The current market
20 for DR in the state provides neither of these things – price
21 stability nor revenue assurance. Absent long-term revenue
22 certainty, WG VIII expects demand response to remain static
23 or decline, creating potential capacity shortfalls and eroding
24 system load factors."⁶⁰

⁶⁰ CASE 07-M-0548, Energy Efficiency Portfolio Proceeding, Working Group VIII, "Demand Response and Peak Reduction," Final Report, October 15, 2008, p. 15 (emph. added).

1 This statement appears to conflict with the assumption made by NYISO in
2 the 2009 RNA that demand response resources will more than double to
3 over 2000 MW and, importantly, remain available through 2018.
4 Companies that sign up to provide demand response are not bound to
5 long-term contracts, and may decide to no longer participate in the future.

6 Furthermore, the energy efficiency programs under development
7 jointly by utilities and NYSERDA under the EEPS portfolio standard have
8 almost no discussions as to how to achieve the mandated 15% reduction in
9 peak demand, even though that reduction in peak demand will be a
10 critical component to reducing the need for new transmission system
11 investments needed for maintaining reliability standards.

12 None of the Working Group reports provide any analysis of the
13 cost of achieving the 15x15 goal. Instead, the Working Group VIII Final
14 Report recommends development of new methodologies to estimate the
15 costs and benefits of proposed programs.⁶¹ Without such information, one
16 cannot state that the 15x15 goals, even if they can be achieved at all, can be
17 achieved cost-effectively.

18 Finally, implementing the EEPS Portfolio Standard does nothing to
19 address the need identified by NYISO to build new transmission facilities

⁶¹ Id., at 3.

1 so as to interconnect the additional renewable generation required under
2 the 25% RPS.

3 **IV. SPECIFIC REBUTTAL OF INTERVENOR WITNESSES**

4 **Q HOW IS THIS SECTION OF YOUR TESTIMONY ORGANIZED?**

5 A We begin with our rebuttal of the testimony of NYDPS witnesses
6 Gjonaj and Wheat, Paynter, Schrom, and de Waal Malefyt. Next, we rebut
7 the testimony of CARI witness Spellman.

8 **A. Rebuttal of NYDPS Witnesses Gjonaj and Wheat**

9 **Q WHAT IS THE FOCUS OF THE TESTIMONY OF NYDPS WITNESSES**
10 **GJONAJ AND WHEAT?**

11 A Their testimony evaluates the costs and benefits of the NYRI
12 project. They measure the short-term benefits as the reduction in
13 production costs made possible by NYRI and the long-term benefits “as
14 the difference between the cost of new entry in SENY and the cost of new
15 entry in UPNY” [Gjonaj and Wheat Testimony, page 8, lines 14-16]. Based
16 on their definition of benefits, they conclude the cost of the NYRI project
17 exceeds its benefits.

18 **Q DID WITNESSES GJONAJ AND WHEAT ATTEMPT TO MEASURE**
19 **THE BENEFITS OF THE NYRI PROJECT STEMMING FROM**
20 **PROVIDING GREATER DELIVERABILITY FOR RENEWABLE**
21 **GENERATING RESOURCES REQUIRED UNDER THE STATE’S RPS?**

22 A No.

1 **Q DID WITNESSES GJONAJ AND WHEAT ACCOUNT FOR THE**
2 **IMPACTS OF RELYING ON ADDITIONAL GAS-FIRED**
3 **GENERATION ON ENERGY RESOURCE DIVERSITY?**

4 A No. In response to Interrogatory NYRI-38 (attached as Exhibit No.
5 JAL/JNP-11-2), they stated no such study was performed by the NYDPS.
6 Furthermore, in response to Interrogatory Request NYRI-58(f) (previously
7 attached as Exhibit No. JAL/JNP-8), witnesses Gjonaj and Wheat state that
8 building new gas-fired generation would increase consumers' exposure to
9 volatile natural gas prices, contrary to the state's policy goal of increased
10 energy resource diversity.

11 **Q DID WITNESSES GJONAJ AND WHEAT STUDY THE FEASIBILITY**
12 **OF BUILDING A 1,200 MW GAS-FIRED GENERATING PLANT IN**
13 **NEW YORK CITY (ZONE J)?**

14 A No. Also in response to Interrogatory NYRI-38 (previously attached
15 as Exhibit No. JAL/JNP-11), they stated no such study was performed by
16 the NYDPS. Interestingly, a similar sized plant, the 1,100 MW generating
17 plant proposed by TransGas Energy, LLC, whose in-service date was
18 originally 2007, was denied a Certificate of Environmental Compatibility
19 and Public Need by the New York State Board on Electric Generation
20 Siting and the Environment in a March 21, 2008 Order.⁶²

⁶² Case No. 01-F-1276, *TransGas Energy Systems LLC*, Opinion and Order Dismissing and Denying Application, March 21, 2008, Order on Rehearing, July 15, 2008.

1 Q ON PAGE 19, LINES 9-13 OF THEIR DIRECT TESTIMONY,
2 WITNESSES GJONAJ AND WHEAT STATE THAT BECAUSE THE
3 FORECAST PRODUCTION SAVINGS IN NYRI ARE A RESULT OF
4 ADDING IN THE NYRI LINE PLUS CHANGES IN THE ASSUMED
5 SUPPLY MIX, IT IS DIFFICULT TO ISOLATE THE IMPACTS SOLELY
6 ATTRIBUTABLE TO THE NYRI LINE. DO YOU AGREE WITH THIS
7 STATEMENT?

8 A No. The referenced statement by NYDPS witnesses Gjonaj and
9 Wheat reveals a basic misunderstanding of cost-benefit analysis. They
10 assume that, to measure correctly the benefits and costs to the NYISO
11 system with and without the NYRI line, there can be no other differences
12 between the scenarios. For example, if 4,000 MW of wind generation is
13 added under a with-NYRI scenario, the same 4,000 MW must be added in
14 the without-NYRI scenario to identify the benefits of NYRI. This is an
15 incorrect characterization of the cost-benefit analysis framework.

16 The problem with their framework assumption is that it eliminates
17 one of the key benefits of the NYRI project: allowing more renewable
18 generating resources and fossil-fuel resources to be built in UPNY and
19 have their output delivered to SENY load centers. There are existing
20 transmission constraints in New York that limit the deliverability of
21 power from UPNY to SENY and NYC. One of the benefits of the NYRI
22 project is that it will help reduce those constraints and thus create an
23 incentive for additional generation to be developed in UPNY for delivery

1 into SENY and NYC. The framework adopted by Gjonaj and Wheat
2 eliminates consideration of that benefit, thus biasing the results of their
3 short-term analysis of the benefits of the NYRI project downwards.

4 Moreover, in describing their short-term impact analysis of
5 generation alternatives to NYRI, witnesses Gjonaj and Wheat make the
6 same mistake for which they had criticized the NYRI analysis.

7 **Q ON PAGE 28, LINES 9-27, OF THEIR TESTIMONY, GJONAJ AND**
8 **WHEAT DESCRIBE THEIR LONG-TERM ANALYSIS FRAMEWORK.**
9 **DO YOU AGREE THAT THEIR LONG-TERM FRAMEWORK IS AN**
10 **ACCURATE MEASURE OF THE BENEFITS OF THE NYRI PROJECT?**

11 **A** No. Gjonaj and Wheat state that,

12 “The premise underlying the approach is that the NYRI
13 transmission line would be reasonable to build if its cost
14 plus the costs of building and running a new upstate
15 generation facility is less than the costs of building and
16 running a new downstate generation facility”

17 [Gjonaj and Wheat Testimony, page 28, lines 9-14]. Their approach, which
18 they state is based on that developed by NYDPS witness Thomas Paynter,
19 is overly simplistic and inaccurate.

20 **Q PLEASE EXPLAIN WHY THE FRAMEWORK USED BY GJONAJ AND**
21 **WHEAT IS SIMPLISTIC AND INACCURATE.**

22 **A** In his testimony, NYDPS witness Paynter states that, “Ultimately,
23 wholesale prices in each location should end up reflecting the local cost of
24 building and operating new generation” [Paynter Testimony, page 5, lines

1 10-12]. Mr. Paynter's statement is wrong. In the long run, if there are no
2 transmission constraints between UPNY and SENY, wholesale prices will
3 not reflect differences in the costs of building generation, they will differ
4 only by the actual cost of wheeling the power from one region to the
5 other.

6 To understand this basic economic concept, suppose that power
7 can be transmitted between UPNY and SENY, but that the cost of building
8 and operating generation in UPNY is one cent per kilowatt-hour lower
9 than in SENY. In that case, generators in UPNY will want to sell power
10 into SENY, where the market price is higher. They will continue to do so
11 until the market price of power in SENY equals the market price in UPNY.
12 If generation costs more in SENY than UPNY, then generators in SENY
13 will be forced to "back down" their plants because of the imports from
14 UPNY.

15 Moreover, even if, *arguendo*, generation costs were lower in UPNY
16 than in SENY in the short-run, the cost of the inputs that make up those
17 generating costs would increase because of the increased demand to build
18 new generating capacity until the cost of building and operating plants in
19 both regions was the same. In fact, in the absence of any transmission

1 constraints, there would be no meaningful distinction between UPNY and
2 SENY as there is today.

3 The NYISO Transmission White Paper recognized the limitations of
4 this framework for analyzing the benefits of transmission investment. If a
5 transmission investment eliminates the deliverability constraint between
6 two disparate regions, then the initial price difference between the regions
7 that provides the incentive for the transmission investment will vanish,
8 making private merchant funding of such transmission impossible.⁶³

9 Second, the framework presupposes that there are no restrictions
10 whatsoever on building downstate generation facilities, which is clearly
11 not the case. If there were not restrictions on building downstream
12 generating capacity, the persistent price differences between UPNY and
13 SENY would not exist, for the reasons discussed above. Moreover, Gjonaj
14 and Wheat implicitly assume that transmission and generation provide
15 identical reliability benefits, but they fail to provide any basis for such an
16 assumption.

17 Ultimately, therefore, the benefit-cost ratios used by Gjonaj and
18 Wheat to demonstrate that the NYRI project is not cost-effective on a long-

⁶³ NYISO Transmission White Paper, at 4-8. "Intra-pool point-to-point merchant transmission projects have failed to develop due in part to the uncertainties concerning price differentials after the construction of a project. Most projects will destroy the spread they are intended to capture by reducing congestion."

1 term basis are irrelevant. First, the theoretical premise of Mr. Paynter's
2 long-run framework, on which Gjonaj and Wheat base their conclusions,
3 is wrong. Second, it presupposes no restrictions on building new
4 generating plants in SENY, thus "assuming away" one of primary reasons
5 for building the NYRI project. Third, it ignores all public policy benefits
6 associated with NYRI that will not be achieved by building additional gas-
7 fired generation in SENY and, in fact, will exacerbate the lack of energy
8 resource diversity, contrary to state policy. Fourth, it fails to account for
9 any differences in the reliability benefits provided by NYRI compared with
10 building generation.

11 **B. Rebuttal of NYDPS Witness Schrom**

12 **Q WHAT IS THE FOCUS OF NYDPS WITNESS SCHROM'S**
13 **TESTIMONY?**

14 **A** Mr. Schrom focuses on the reliability impacts of the NYRI project.
15 He concludes that NYRI would adversely affect reliability and lead to
16 reduced operation of the Roseton and Danskammer generating units in
17 SENY, and possibly their retirement [Schrom Testimony, page 8, lines 9-
18 15].

19 **Q DID MR. SCHROM PREPARE ANY ANALYSIS ON WHICH HE**
20 **BASED HIS CONCLUSIONS ABOUT POSSIBLE GENERATION**
21 **RETIREMENTS?**

1 A No. According to Mr. Schrom's response to Interrogatory NYRI-119
2 (attached as Exhibit No. JAL/JNP-12), Mr. Schrom states that he
3 conducted no analysis in support of his statement.

4 **Q DID MR. SCHROM STATE THAT GENERATION LOCATED IN SENY**
5 **WOULD PROVIDE GREATER RELIABILITY BENEFITS THAN**
6 **TRANSMISSION ALTERNATIVES LIKE NYRI?**

7 A Yes. Mr. Schrom also states that new generation in SENY would
8 provide greater reliability benefits than NYRI because

9 "It is best to have generation located close to the load center.
10 A generator close to the load center has lower delivery losses
11 than a generator that is far away and dependent upon the
12 transmission system to deliver it"

13 [Schrom Testimony, page 16, lines 12-16].

14 **Q DID MR. SCHROM PREPARE ANY ANALYSIS TO SUPPORT HIS**
15 **CLAIM THAT GENERATION LOCATED IN SENY WOULD PROVIDE**
16 **GREATER RELIABILITY BENEFITS THAN TRANSMISSION**
17 **ALTERNATIVES?**

18 A No. In his response to Interrogatory NYRI-54 (previously attached
19 as Exhibit No. JAL/JNP-9), Mr. Schrom states he prepared no analysis of
20 the relative reliability benefits of generation and transmission. He simply
21 relies on statements in the NYISO Comprehensive Reliability Plan that
22 building generation close to load centers can reduce electrical losses
23 compared with generators located further away. While this is true, it
24 completely ignores the question.

1 **Q DO YOU AGREE WITH MR. SCHROM THAT LOCATING**
2 **GENERATION NEAR A LOAD CENTER PROVIDES GREATER**
3 **RELIABILITY THAN DISTANT GENERATION DEPENDENT ON THE**
4 **TRANSMISSION SYSTEM FOR DELIVERY?**

5 **A** No. Mr. Schrom's statement grossly oversimplifies system
6 reliability issues. The logical extension of his argument is that all
7 generation should be located adjacent to or within load centers to provide
8 maximum reliability. Such a conclusion, however, flies in the face of why
9 power pools and high voltage transmission systems were developed in the
10 first place.

11 **Q PLEASE EXPLAIN.**

12 **A** There are two main reasons for interconnecting generating units
13 with high-voltage transmission systems. The first is to increase system
14 reliability, not reduce it as Mr. Schrom implies. The second is to provide
15 access to lower-cost generating resources, thus providing consumers with
16 more economical electricity supplies.

17 To achieve the same 1-in-10 year "loss of load expectation" (LOLE)
18 standard using just local generating units, one must have sufficient excess
19 generating capacity to ensure that forced generator outages do not result
20 in blackouts. For example, if the electric demand in a local area can be
21 met with just one generating unit, ensuring a 1-in-10 year LOLE would

1 require that many other generating units were standing by in case the one
2 generator suffered a forced outage. Moreover, additional generation
3 would be required when the one generating unit was shutdown for
4 routine maintenance. Having access to a broad array of generating units
5 reduces the likelihood that a forced outage at a generator will cause a local
6 blackout.

7 The “installed reserve margin” in NYISO, for example, is
8 determined by the New York State Reliability Council (NYRSC) based on
9 the available pool of generating resources that can meet load, as well as
10 forced outage rates for generators, and the mix of generating resources.⁶⁴
11 The NYRSC also determine the minimum percentage of local generating
12 resources that must be located in the New York City and Long Island
13 zones because of existing constraints on transmission capacity into those
14 zones. If there was no transmission capacity into New York City, for

⁶⁴ Installed reserve margin (IRM) for New York State, as well as minimum locational capacity requirements (MLCRs) for New York City and Long Island, are determined by the New York State Reliability Council (NYSRC). For the 2009 planning year, which begins on May 1, 2009, the NYRSC increased the statewide IRM from 15 percent in 2008 to 16.2% in 2009. According to the NYRSC, one of the main reasons for the increase was an increase in generator forced outages, which the NYSRC stated “was particularly significant for units located in NYC.” See, NYSRC, New York Control Area Installed Capacity Requirements for the Period May 2009 through April 2010, Technical Study Report, December 5, 2008, at 3. The full report is available at: <http://www.nysrc.org/pdf/Reports/2009%20IRM%20Report%20-%20Final%2012%2005%2008%20V1.pdf>.

1 example, far more generation would need to be built in the city, not only
2 to meet electric demand, but to ensure that there was enough generation
3 to address forced outages.

4 **Q DID MR. SCHROM CONSIDER THESE ISSUES IN SUPPORT OF HIS**
5 **STATEMENT THAT BUILDING GENERATION NEAR LOAD**
6 **CENTERS PROVIDES GREATER RELIABILITY THAN ADDITIONAL**
7 **TRANSMISSION CAPACITY?**

8 **A No.**

9 **Q DID MR. SCHROM PREPARE ANY STUDIES OF GENERATING**
10 **RESOURCES IN SENY AS THE BASIS FOR HIS STATEMENT THAT**
11 **BUILDING GENERATION IN SENY WOULD BE PREFERABLE TO**
12 **BUILDING TRANSMISSION?**

13 **A No.** According to his response to Interrogatory NYRI-107 (attached
14 as Exhibit No. JAL/JNP-13), Mr. Schrom states that he conducted no
15 studies.

16 **Q DID MR. SCHROM STUDY THE TYPES OF GENERATION THAT**
17 **COULD BE BUILT IN SENY OR NEW YORK CITY?**

18 **A No.** Also in response to Interrogatory NYRI-54 (previously
19 attached as Exhibit No. JAL/JNP-9), Mr. Schrom stated he did not take that
20 into consideration. However, in response to Interrogatory NYRI-58,
21 NYDPS (previously attached as Exhibit No. JAL/JNP-8), witnesses state
22 that they believe it unlikely that either new nuclear or coal-fired
23 generation would be built in New York State “due to siting concerns.”

1 This leaves gas-fired generation as the only reasonable fossil-fuel
2 alternative.

3 **Q DID MR. SCHROM CONSIDER THE IMPACTS OF SITING NEW**
4 **GENERATION IN SENY OR NEW YORK CITY ON ENERGY**
5 **RESOURCE DIVERSITY?**

6 **A**No. Again, in response to Interrogatory NYRI-54, Mr. Schrom
7 states that he did not consider that issue.

8 **Q IN HIS RESPONSE TO PART (B) OF THAT INTERROGATORY NYRI-**
9 **54, MR. SCHROM REFERS TO PAGE 8 OF THE NYISO 2008**
10 **COMPREHENSIVE RELIABILITY PLAN ("2008 CRP") AS EVIDENCE**
11 **THAT LOCAL GENERATION PROVIDES BOTH RESOURCE**
12 **ADEQUACY AND SYSTEM SECURITY. DOES PAGE 8 OF THE 2008**
13 **CRP STATE THAT?**

14 **A**No. The specific question and response of Mr. Schrom are as
15 follows:

16 Please state whether "closeness" to load centers provides
17 resource adequacy or system security or both.

18 **Response:**

19 Closeness to the load center helps to meet resource adequacy
20 and system security. It also reduces the delivery loss to
21 deliver the power from the generating facility. (See the 2008
22 CRP, p.8.)

23 Page 8 of the 2008 CRP is attached as Exhibit No. JAL/JNP-14. As
24 can be seen from the exhibit, there is no such statement on page 8 of
25 the 2008 CRP.

26 **Q CAN YOU PROVIDE SIMPLE DEFINITIONS OF "RESOURCE**
27 **ADEQUACY" AND "SYSTEM SECURITY?"**

1 A Yes. The NYISO 2008 Comprehensive Reliability Plan (“CRP”)
2 defines adequacy and security as follows:

3 “Adequacy, which encompasses both generation and
4 transmission adequacy, refers to the ability of the bulk power
5 system to supply the aggregate requirements of consumers
6 at all times, accounting for scheduled and unscheduled
7 outages of system components. Security refers to the ability
8 of the bulk power system to withstand disturbances such as
9 electric short circuits or unanticipated loss of system
10 components.”⁶⁵

11 Thus, resource adequacy can be thought of as a long-run requirement:
12 there must be sufficient generating capacity installed to meet forecast peak
13 loads plus an extra “cushion” to account for unexpected changes, such as
14 generator forced outages.

15 System security is more of an instantaneous concept. Since
16 electricity demand fluctuates constantly, NYISO must always be able to
17 instantly balance supply and demand. Doing so requires that NYISO be
18 able to instantly ramp up and ramp down certain generating resources
19 (typically called “automatic generation control”), as well as maintain
20 resources “in reserve” that can be available immediately or within a few
21 minutes’ time (typically called “spinning reserve” and “non-spinning
22 reserve”).

⁶⁵ 2008 CRP, at 2-6.

1 **Q DO YOU AGREE THAT GENERATING RESOURCES CAN PROVIDE**
2 **RESOURCE ADEQUACY AND SYSTEM SECURITY?**

3 A Yes, depending on the type of generator. Generation that is not
4 schedulable, such as wind generation, will typically provide less resource
5 adequacy and system security than generation that is schedulable, such as
6 fossil-fuel generation. However, it is simply not true that a generator that
7 is “close” to a load center necessarily provides greater amounts of
8 resource adequacy and system security than a generator that is “less
9 close.” The equivalent resource adequacy and system security will
10 depend on numerous factors, including the type of generator, its forced
11 outage rate, the generator’s location in NYISO, and so forth.

12 **Q ON PAGE 16, LINES 17-23, MR. SCHROM STATES THAT ENERGY**
13 **EFFICIENCY PROVIDES GREATER RELIABILITY BENEFITS THAN**
14 **EITHER GENERATION OR TRANSMISSION. DO YOU AGREE?**

15 A No. Mr. Schrom answers that, “While I am not an energy efficiency
16 specialist, a reduction in load demand of several hundreds of MW would
17 reduce the need for new generation and transmission” [Schrom
18 Testimony, at 16, lines 20-23]. Mr. Schrom’s answer belies two facts. First,
19 he admits he has insufficient knowledge to answer the question. Second,
20 as with his statement regarding the greater reliability benefits of local
21 generation, Mr. Schrom has grossly oversimplified numerous issues.

1 **Q WHAT ARE SOME OF THE ISSUES AFFECTING THE RELIABILITY**
2 **BENEFITS OF ENERGY EFFICIENCY RESOURCES?**

3 A Although energy efficiency programs can reduce electricity
4 demand, the amount of the reduction can be highly uncertain, depending
5 on the program. For example, demand response resources, in which
6 customers agree to reduce their electricity use when called on by NYISO,
7 provide a known quantity of demand reduction at a given time (assuming
8 the demand response resource complies with NYISO requirements).
9 However, general energy efficiency measures, such as installing compact
10 fluorescent lights in people's homes, are not controllable. Thus, all things
11 equal, they provide much less reliability benefits than controllable
12 resources like demand response, generation or transmission. Second,
13 whereas some energy efficiency resources can contribute to long-term
14 resource adequacy, they may not contribute whatsoever to system security
15 for the simple reason they are not controllable at all. NYISO does not
16 know which individuals in which homes have their lights turned on or off
17 at a given moment, who are using their home computers, washing
18 laundry, and so forth. Thus, it is not possible for NYISO to control that
19 energy use.

20 **Q HOW DID MR. SCHROM RESPOND WHEN ASKED WHETHER THE**
21 **RELIABILITY BENEFITS OF ENERGY EFFICIENCY WERE GREATER**

1 **THAN THAT OF ADDITIONAL GENERATION OR**
2 **TRANSMISSION?**

3 A In his response to Interrogatory NYRI-55 (attached as Exhibit No.
4 JAL/JNP-15), Mr. Schrom states that “Energy efficiency can reduce the
5 peak load experience [sic] by the NYISO, and therefore reduce the need to
6 have more generation. See the 2009-2010 IRM study done by the NYSRC.”
7 Thus, Mr. Schrom failed to answer the question. Similarly, when asked
8 whether NYISO considers the per-MW reliability benefits of energy
9 efficiency resources to be the same as, more than, or less than the per MW
10 reliability benefits of generation or transmission, Mr. Schrom provides an
11 undocumented quote, apparently from the 2009 Reliability Needs
12 Assessment. Again, he failed to answer the question.

13 **Q ON PAGE 17, LINES 2-13 OF HIS TESTIMONY, MR. SCHROM**
14 **STATED THAT A BETTER TRANSMISSION ALTERNATIVE TO THE**
15 **NYRI PROJECT WOULD BE AN HVDC LINE PROPOSED BY NYPA.**
16 **WAS MR. SCHROM’S RESPONSE BASED ON HIS REVIEW OF THE**
17 **PLANNING STUDIES BY NYPA FOR THAT TRANSMISSION LINE?**

18 A No. According to Mr. Schrom’s response to Interrogatory NYRI-56
19 (previously attached as Exhibit No. JAL/JNP-7), the NYPA project is not
20 even in the NYISO queue. Mr. Schrom also states that he has not reviewed
21 any studies of the proposed NYPA line.

1 **Q DID MR. SCHROM CONDUCT ANY STUDIES OF THE NYPA HVDC**
2 **LINE TO REACH HIS CONCLUSION ABOUT ITS PREFERABILITY**
3 **TO THE NYRI PROJECT?**

4 **A**No. In response to Interrogatory NYRI-56, Mr. Schrom states that
5 he conducted no such studies.

6 **Q SINCE THE NYPA PROJECT IS NOT EVEN IN THE NYISO QUEUE**
7 **AT THIS TIME, DO YOU CONSIDER IT A BETTER TRANSMISSION**
8 **ALTERNATIVE THAN THE NYRI PROJECT?**

9 **A**No. First, NYPA witness O'Connor has stated that NYPA has no
10 current plans to develop this alternative. Second, since the NYPA project
11 is not even in the NYISO queue, it has not submitted any of the required
12 planning studies. Thus, there is no information for Mr. Schrom to base his
13 conclusion that the NYPA project is preferable to the NYRI project. Third,
14 Mr. Schrom is once again introducing an impossible burden on NYRI or
15 any developer of any project, to wit, that a proposed project must be
16 found to be superior to any potential alternative, regardless of whether
17 such alternatives have even been proposed as market-based or Gap
18 solutions.

19 **C. Rebuttal of NYDPS Witness de Waal Malefyt**

20 **Q WHAT WAS THE SUBJECT OF NYDPS WITNESS DE WAAL**
21 **MALEFYT'S TESTIMONY?**

22 **A**Mr. de Waal Malefyt's testimony appears to address environmental
23 issues associated with the NYRI project as well as compare the

1 environmental impacts of NYRI with those of gas-fired generation units in
2 SENY.

3 **Q ON PAGE 25, LINE 22 – PAGE 30, LINE 16, MR. DE WAAL MALEFYT**
4 **DISCUSSES THE LOWER ENVIRONMENTAL IMPACTS OF GAS-**
5 **FIRED GENERATION ALTERNATIVES IN SENY COMPARED TO**
6 **THE ENVIRONMENTAL IMPACTS OF THE NYRI PROJECT. DID**
7 **MR. DE WAAL MALEFYT ADDRESS THE STATE’S ENERGY**
8 **RESOURCE DIVERSITY POLICY GOAL IN HIS**
9 **RECOMMENDATIONS?**

10 **A** No. In his response to Interrogatory NYRI-17 (attached as Exhibit
11 No. JAL/JNP-16), Mr. de Waal Malefyt stated that the NYDPS did not
12 analyze the impacts on energy resource diversity.

13 **Q DID MR. DE WAAL MALEFYT ADDRESS THE IMPLICATIONS OF**
14 **THE STATE’S MEMBERSHIP IN RGGI ON THE FEASIBILITY OF**
15 **BUILDING NEW GAS-FIRED GENERATION IN SENY?**

16 **A** No. In his response to Interrogatory NYRI-18 (attached as Exhibit
17 No. JAL/JNP-17), Mr. de Waal Malefyt stated that the NYDPS did not
18 analyze the impacts on energy resource diversity.

19 **Q DR. LESSER, ON PAGE 58, LINES 1-3, MR. DE WAAL MALEFYT**
20 **STATES THAT THE SOCIETAL COSTS OF THE NYRI PROJECT**
21 **EXCEEDS IT BENEFITS. DO YOU AGREE?**

22 **A** No. Mr. de Waal Malefyt provided no basis for his statement. For
23 example, he failed to address the reduction in energy resource diversity
24 that would occur if his recommended gas-fired generation alternatives
25 were constructed. He failed to address NYISO’s statement that new

1 transmission must be built if the state is to meet its RPS requirement. He
2 failed to address the implications of the state's membership in RGGI.

3 To perform a societal cost-benefit analysis correctly, one needs to
4 address not only private costs and benefits, such as production cost
5 changes, but also non-market costs and benefits. Mr. de Waal Malefyt, for
6 example, provided a qualitative (but not quantitative) assessment of the
7 relative environmental costs of the NYRI project. For example in response
8 to Interrogatory NYRI-62 (attached as Exhibit No. JAL/JNP-18), Mr. de
9 Waal Malefyt stated that he performed no analytical studies that are
10 commonly used to estimate environmental costs, but instead based his
11 conclusions "on his experience."

12 Furthermore, Mr. de Waal Malefyt failed to address any of the
13 potential environmental benefits, such as the project's allowing for greater
14 deliverability of renewable generation to meet the state's RPS requirement
15 and reduce greenhouse gas emissions, as required under RGGI. Nor did
16 he attempt to evaluate the benefits of greater energy resource diversity (or,
17 alternatively, the costs of reduced energy resource diversity caused by
18 even greater reliance on gas-fired generation in SENY.)

1 **D. Rebuttal of CARI Witness Spellman**

2 **Q PLEASE DESCRIBE THE SIGNIFICANT FLAWS IN MR. SPELLMAN'S**
3 **ASSESSMENT OF THE ENERGY EFFICIENCY POTENTIAL IN**
4 **SOUTH EAST NEW YORK.**

5 A Perhaps the most significant flaw of Mr. Spellman's assessment of
6 the potential for energy efficiency improvements in eight counties of
7 down-state New York is the lack of a credible baseline. In Exhibit RFS-2 of
8 his direct testimony, Mr. Spellman fails to provide evidence of having
9 carried out, and/or relied on, any customer appliance saturation surveys
10 or other primary research to obtain the detailed information relating to the
11 current saturation of electric energy efficiency measures in the SENY
12 region. Further he fails to provide evidence of having carried out
13 segmentation analyses of building stocks by size construction type, age,
14 etc. or of appliance stocks by type, age, efficiency, etc.

15 As is well documented in the energy efficiency literature, these are
16 essential first steps in ascertaining the technical feasibility of each energy
17 efficiency measure from an engineering perspective.⁶⁶ Mr. Spellman states
18 that the technical potential determined is based on 100% penetration of all
19 the energy efficiency measures identified [Exhibit RFS-2, page 19]. This is
20 problematic, to say the least, since the economic and achievable potential

⁶⁶ J. Chamberlin and C. Gellings, Demand-Side Management: Concepts & Methods,
2nd ed., (New York: Fairmont Press, 1993).

1 at the core of his non-route alternative are based on this inaccurate first
2 step of his analysis.

3 **Q PLEASE CONTINUE.**

4 A Another significant concern about Mr. Spellman's analysis in
5 Exhibit RFS-2 is that it relies on energy savings estimates from diverse
6 sources, including baseline data and assumptions corresponding to
7 demographic, economic, building construction and climatic conditions
8 different from those found at SENY. Thus, the baseline energy use for
9 those measures must be adjusted to reflect local SENY conditions likely to
10 be encountered in the field at the time of adopting the energy savings
11 measures. These conditions include, but are not limited to, building size,
12 construction characteristics, operating hours, weather, etc. The only
13 reliable source for this information would be recent building stock and
14 customer surveys which Mr. Spellman does not report using in the
15 analysis as presented in Exhibit RFS-2. Some of the baseline electric
16 consumption estimates were attributed to the 2001 EIA Residential Energy
17 Consumption Survey, but some were based on energy consumption
18 surveys carried out in other U.S. regions with different housing
19 characteristics, weather, etc. For example, the base electric use for single
20 family residence central air-conditioning measures was taken from a 2003

1 residential survey carried out by Mr. Spellman's firm for Brazos Electric
2 Cooperative, near Waco, Texas.⁶⁷

3 **Q DO YOU AGREE WITH MR. SPELLMAN'S METHODOLOGY TO**
4 **ESTIMATE THE TECHNICAL, ECONOMIC AND ACHIEVABLE**
5 **ENERGY SAVINGS POTENTIAL?**

6 A No. As explained earlier in my testimony, while the methodology
7 adopted by Mr. Spellman to find the technical potential is in principle
8 correct, his use of inaccurate proxy data, in lieu of area-specific building
9 and appliance saturation survey data, introduces great uncertainty to their
10 potential estimate. Furthermore, the cost-effectiveness criterion adopted
11 by Mr. Spellman to establish the economic potential ignores the cost-
12 effectiveness tests prescribed by both the NYPSC and NYSERDA.

13 **Q WHAT COST-EFFECTIVENESS CRITERIA DID MR. SPELLMAN**
14 **ADOPT AND HOW IS IT DIFFERENT THAN THOSE SANCTIONED**
15 **BY THE NYPSC AND NYSERDA?**

16 A In order to estimate the economic potential of energy-efficiency,
17 that is, the portion of the technical potential that is deemed economic
18 under some criteria, Mr. Spellman's analysis considers cost-effective all
19 energy efficiency measures with an estimated cost below that of the
20 weighted average locational marginal price for SENY, equal to \$0.07/kWh
21 (2009\$).

⁶⁷ RFS-2, Appendix A-3, page A-15.

1 Mr. Spellman assumes this will be the average cost of the energy
2 delivered by the NYRI transmission line, although that estimate was
3 determined in large part by an assumption made with respect to the
4 amount of new and efficient gas fired combined cycle generation and
5 wind likely to be built to take advantage of the existence of NYRI, and the
6 access to high price SENY markets that the line will provide. The selection
7 of this “threshold” is arbitrary, as well as contrary to well-established
8 regulatory principles of cost-effectiveness for demand-side resources.

9 In reality, an energy efficiency program aspiring to New York State
10 and or rate payer funding, is required by NYSERDA and the PSC to
11 demonstrate its cost-effectiveness by applying a test called the “Total
12 Resource Cost” (TRC). This test compares the total cost of installing an
13 energy efficiency measure including those incurred by the energy end-
14 user and the program administrator including equipment, installation,
15 O&M and removal and disposal; against the benefits it captures,
16 including the price of the energy and water saved and any tax credits
17 received. Mr. Spellman’s criteria, however, simply compares the marginal
18 costs of his proposed energy efficiency measures with the average price of
19 energy in different zones.

1 **Q PLEASE DESCRIBE OTHER UNRELIABLE ASSUMPTIONS MADE BY**
2 **MR. SPELLMAN IN THE ANALYSIS PRESENTED IN EXHIBIT RFS-2.**

3 **A**Mr. Spellman extrapolates unrealistically high upper limits on
4 program measure penetration.⁶⁸ To do this, he cites to penetration rates
5 that have been achieved by a select group of energy efficiency programs in
6 the U.S. However, these programs have involved energy efficiency
7 technologies far different than those proposed, and Mr. Spellman fails to
8 provide any evidence that those programmatic levels can be achieved in
9 SENY.

10 To prove that the extremely high market penetration levels at the
11 core of CARI's Non-Route Alternative [Exhibit RFS-2, page 34] are
12 achievable, Mr. Spellman lists ten U.S. Energy Efficiency programs with
13 very high market penetrations. The list includes: programs that have taken
14 three decades to achieve 80% penetration (e.g., Central Maine Power –
15 residential water heater bundle-up program); one residential multi-
16 family/low income program for new construction in Vermont that reached
17 90% penetration (not highly applicable in the current real estate climate);
18 three high-efficiency gas furnace programs (not comparable to the high
19 efficiency space conditioning technologies proposed); and, one statistic on

⁶⁸ The term “penetration” in this context represents the percentage of the technically and economically feasible applications of a specific energy efficiency measure that is ultimately achieved.

1 the 75% market share achieved by Energy Star windows in the US
2 Northwest by 2002 (different demographics, building stock, and
3 economic growth). The programs listed and the measures whose
4 adoption they promoted, are either not among the ones considered in Mr.
5 Spellman's programs (high-efficiency gas furnaces), or represent a
6 relatively small share of the total energy savings projected by Mr.
7 Spellman (DHW bundle, multi-family new construction, and Energy Star
8 windows).

9 **Q DOES MR. SPELLMAN PRESENT ANY OTHER EVIDENCE OF THE**
10 **FEASIBILITY OF ACHIEVING SUCH UNCOMMON LEVELS OF**
11 **ENERGY EFFICIENCY PROGRAM PENETRATION?**

12 **A** Yes. In Exhibit RFS-2, pages 36-38, as evidence of the feasibility of
13 achieving unrealistically high penetration rates, Mr. Spellman presents,
14 the results of his single-question survey of eight energy efficiency
15 "experts." Mr. Spellman's "survey" is laughable in its design.

16 First, Mr. Spellman's survey question,

17 "Based on your experience and knowledge, and given the
18 assumptions of implementation of very aggressive energy
19 efficiency programs for the next 10 years and unlimited
20 funding, what maximum penetration do you believe could
21 be achieved for electric energy efficiency measures ten years
22 from now?"⁶⁹

⁶⁹ Exhibit RFS-2, page 36.

1 is vague, biased, and unrealistic. Depending on how one defines “very
2 aggressive,” the results may be anything. Second, framing a question
3 based on “unlimited funding” is clearly inappropriate, as funding is
4 always limited, if for nothing else that EE programs in New York must
5 pass established cost-effectiveness criteria. The answers he provides from
6 his energy efficiency “experts” are highly varied (as one would expect)
7 nor quantifiable. Thus, the responses of these “experts” has no probative
8 value in supporting Mr. Spellman’s extravagant claims of achievable
9 program penetrations.

10 **Q BASED ON YOUR EXPERIENCE, DO YOU THINK THE**
11 **PROGRAMMATIC APPROACHES PROPOSED BY MR. SPELLMAN**
12 **ARE LIKELY TO PRODUCE THE AMBITIOUS GOALS DESCRIBED**
13 **IN EXHIBIT RFS-2?**

14 **A** No. It’s highly unlikely that the loosely sketched programmatic
15 approaches described by Mr. Spellman in its report, if implemented,
16 would reach in 10 years the “achievable” energy savings potential
17 estimated by Mr. Spellman. First, contrary to prudent programming
18 practice, Mr. Spellman’s proposed program schedule doesn’t consider a
19 pilot stage to vet marketing approaches, but assumes direct full-scale
20 implementation, increasing the risk of adopting ineffective marketing
21 approaches. Second, the programs proposed by Mr. Spellman intend to

1 capture the same annual energy savings from year one, ignoring the
2 characteristic “S”-shaped uptake pattern of technology diffusion
3 [adoption] programs. Mr. Spellman’s self-proclaimed “aggressive”
4 assumptions ignores the typically slower participation rates observed in
5 the beginning phase of demand-side management programs. Thus, it is
6 highly unlikely that Mr. Spellman’s estimates of “achievable” energy
7 savings will occur materialize in the time he proposes.

8 **Q CAN YOU POINT TO ANY OTHER PARTIES THAT HAVE**
9 **CONCLUDED THAT ACHIEVING THE LEVELS OF ENERGY**
10 **EFFICIENCY SAVINGS PROJECTED BY MR. SPELLMAN IS**
11 **UNREALISTIC?**

12 **A** Yes. NYISO’s 2009 RNA load forecast conservatively assumes that
13 only 30% of the 15x15 EEPs goals will be met. Since Mr. Spellman’s
14 achievable potential estimate by 2015 is commensurate with the goals of
15 the 15x15 EEPs,⁷⁰ NYISO’s conclusion supports my own.

16 **Q HOW MUCH WEIGHT SHOULD BE GIVEN TO MR. SPELLMAN’S**
17 **NON-ROUTE ALTERNATIVE TO NYRI?**

18 **A** None. Mr. Spellman’s potential analysis is riddled with inaccurate
19 and poorly supported assumptions and, as a consequence, has no
20 probative value. His penetration goals across all programs are

⁷⁰ RFS-2, Table 1-2, page 7, shows an achievable impact 14% of electric energy sales in downstate New York.

1 unrealistically high and not adequately supported by evidence of
2 comparable programs with similar technologies, financial incentives,
3 market conditions, marketing techniques and timelines.

4 **V. INDEPENDENT ANALYSIS OF THE NYRI PROJECT'S ECONOMIC**
5 **BENEFITS**

6 **Q DID YOU PERFORM AN INDEPENDENT ANALYSIS OF THE**
7 **ECONOMIC BENEFITS OF THE NYRI PROJECT?**

8 A Yes. We performed an analysis using the AuroraXMP® ("Aurora")
9 hourly model developed by EPIS, Inc. Aurora has been in use since 1997.
10 Like the GE-MAPS model used in the CRA, NYDPS, and Consolidated
11 Edison analyses, Aurora is an hourly model that determines a least-cost
12 dispatch of available generating plants to meet forecast loads. We
13 prepared an analysis of product cost savings that would be made possible
14 by NYRI in the years 2012, 2015, and 2018, as did other witnesses in this
15 proceeding.

16 **Q WHY DIDN'T YOU PERFORM AN ANALYSIS USING GE-MAPS?**

17 A We do not have an operating license for GE-MAPS. Our firm has
18 an operating license for Aurora because we determined the model best
19 met our client needs. There are, of course, many other production
20 simulation models available in the market.

1 **Q WHAT LOAD FORECAST DID YOU BASE YOUR ANALYSIS OF**
2 **PRODUCTION COST SAVINGS STEMMING FROM THE NYRI**
3 **PROJECT ON?**

4 **A** We used the load forecasts for peak demand and annual electric
5 consumption that was published in the 2009 RNA. This is the most
6 current forecast NYISO has available and includes NYISO's assumptions
7 regarding the impacts of the state's 15x15 EEPS portfolio standard on
8 forecast peak loads and energy consumption.

9 **Q DID YOUR ANALYSIS ACCOUNT FOR THE IMPACTS OF THE**
10 **RECENT RGGI AUCTION IN NEW YORK ON GENERATOR COSTS**
11 **AND DISPATCH?**

12 **A** Yes. We assumed an allowance price of \$3.07 per ton, based on the
13 results of the December 2008 RGGI auction.

14 **Q DID YOU PERFORM A NODAL ANALYSIS LIKE THE ANALYSES**
15 **PERFORMED USING GE-MAPS?**

16 **A** No. Although Aurora can perform nodal-level analysis just as GE-
17 MAPS, we performed our analysis at the zonal level. In other words, we
18 evaluated the production cost changes occurring in each zone as a result
19 of NYRI. Our zonal analysis assumes that intra-zonal constraints are not
20 binding and thus allows for more efficient dispatch of generating units
21 within each zone. We believe this approach, while obviously providing a
22 less detailed analysis than the nodal analyses performed using GE-MAPS,

1 provides a better indication of the production cost benefits provided by
2 NYRI because it does not hold NYRI hostage to existing transmission
3 constraints and reliability issues within individual zones, such as New
4 York City (Zone J). Instead, the purpose of the NYRI project is to increase
5 transmission capacity between UPNY and SENY, enable greater transfers
6 of lower-cost generation from UPNY to SENY, and facilitate development
7 of new renewable generating resources. The NYRI project is not intended
8 to solve within-zone transmission constraints. Thus, by performing a
9 zonal analysis that assumes existing within-zone transmission constraints
10 have been addressed, we obtain a more reasonable estimate of the
11 production cost savings that could be realized with the NYRI project.

12 **Q ON PAGE 19, LINES 9-16 OF THEIR TESTIMONY, NYDPS**
13 **WITNESSES GJONAJ AND WHEAT CRITICIZED THE ANALYSIS**
14 **PERFORMED BY CRA, STATING THAT DIFFERENCES IN THE**
15 **"WITH-NYRI" AND "WITHOUT-NYRI" GENERATION MIXES**
16 **"MAKE IT DIFFICULT TO ISOLATE THE IMPACTS THAT ARE**
17 **ATTRIBUTABLE SOLELY TO THE ADDITION OF THE NYRI LINE."**
18 **DO YOU AGREE?**

19 **A** No. By holding the generation mix constant in their with-NYRI
20 and without-NYRI cases, NYDPS witnesses Gjonaj and Wheat eliminate
21 one of the key reasons for building NYRI in the first place, which is to
22 encourage greater development of renewable and other generating
23 resources in UPNY. As we discussed earlier in our testimony, the 2007

1 NERA analysis of new capacity costs that was prepared for NYISO
2 determined that the costs of building new generation in UPNY were far
3 lower than those in NYC or Long Island.⁷¹ From an economic standpoint,
4 therefore, it is appropriate to assume a different generating resource mix
5 in UPNY with NYRI than without NYRI.

6 **Q WHAT GENERATION ADDITIONS IN UPNY DID YOU ASSUME IN**
7 **THE WITH NYRI CASE?**

8 **A** First, we assumed that NYRI would allow for additional
9 development of renewable resource generation in UPNY. As the NYISO
10 Transmission White Paper stated, without new transmission capacity, it
11 will be impossible to meet the state's RPS requirement. Moreover, as we
12 discussed previously in our testimony, renewable generation developers
13 will have no economic incentive to build new generation if they cannot
14 sell the output from that generation because it is "bottled up." We
15 therefore assumed that all of the wind generation shown in the February
16 2009 NYISO queue with a LFIP status of 5 or higher would be developed if
17 NYRI is developed. We also assumed that other projects in the NYISO
18 interconnection queue with a status of 9 or higher would be completed.

⁷¹ In fact, Gjonaj and Wheat also cited to that same study as the basis for the cost of new gas-fired generation in their GE-MAPS analysis [Gjonaj and Wheat Testimony, page 30, line 18 – page 31, line 9].

1 Second, in order to meet future load growth, even with the 15x15
2 EEPS program, and expected generator retirements, in 2018 we added
3 several gas-fired generating units in SENY, specifically in zones E, G, I and
4 J.

5 **Q PLEASE SUMMARIZE THE GENERATION ADDITIONS YOU MADE**
6 **IN THE WITH-NYRI AND WITHOUT-NYRI CASES.**

7 A Our generation addition assumptions began with the February
8 2009 NYISO interconnection queue. Specifically, in the with-NYRI case,
9 we added all new wind generating resources with a status of 5 or above in
10 the queue, based on proposed generation in the current NYISO queue that
11 are shown as having on-line dates prior to 2012 and a current LFIP status
12 of 5. Consistent with the conclusions of the NYISO Transmission White
13 Paper discussed infra, we assumed that, in the absence of new
14 transmission capacity, it will not be possible to install enough wind
15 generation to meet the state's 25% RPS requirement by 2013.

16 In terms of fossil generation, we assumed that all fossil-fuel
17 generating resources having a status number of nine or above in the
18 current queue would also be developed and operating at the current in-
19 service dates shown in the queue. These are shown in Table 2 (also
20 attached as Exhibit No. JAL/JNP-19). We also assumed that in the absence
21 of NYRI one new 1,000 MW gas-fired combined cycle unit to be built near

Marcy with an assumed on-line date of 2018. This is somewhat later than the time frame that NYDPS witnesses Gjonaj and Wheat assumed, although they assumed a slightly larger plant capacity of 1,200 MW would be built [Gjonaj and Wheat, page 26, lines 17-19]. Additionally, the elimination of load curtailment hours in our model required the addition of one 600 MW CC facility in Zone G and two 230 MW GT peakers in Zone J.

TABLE 2

NYISO Added Resources

Resource Name	Heat Rate	Capacity (kW)	Fuel Type	Zone	2012 with NYRI	2012 without NYRI	2015 with NYRI	2015 without NYRI	2018 with NYRI	2018 without NYRI
Gas-fired Generation										
New 1000 CC in Zone E	7,000	1,000,000	NG	E					X	X
New 230 GT 1 in Zone G	9,000	230,000	NG	G					X	
New 230 GT 2 in Zone G	9,000	230,000	NG	G					X	
New 230 GT 1 in Zone I	9,000	230,000	NG	I					X	
New 230 GT 1 in Zone J	9,000	230,000	NG	J					X	X
New 230 GT 2 in Zone J	9,000	230,000	NG	J						X
New 600 CC in Zone G	7,000	600,000	NG	G						X
Total New Gas-fired Generation									1,920,000	2,060,000
Wind Generation										
Windhorse Beekmantown	0	19,500	WND	D	X		X		X	
Alabama Ledge Wind Farm	0	79,200	WND	A	X		X		X	
Allegheny Windpark	0	100,500	WND	A	X		X		X	
Ball Hill Windpark	0	90,000	WND	A	X		X		X	
GenWy Wind Farm	0	478,500	WND	A	X		X		X	
New Grange Wind Farm	0	79,200	WND	A	X		X		X	
Steel Winds II	0	45,000	WND	A	X		X		X	
Armenia Mountain II	0	75,000	WND	C	X		X		X	
Hartsville Wind Farm	0	50,000	WND	C	X		X		X	
Prattsburgh Wind Park	0	55,500	WND	C	X		X		X	
Ellensburg II Windfield	0	21,000	WND	D	X		X		X	
Noble Burke Windpark	0	120,000	WND	D	X		X		X	
Cape Vincent	0	210,000	WND	E	X		X		X	
Cherry Valley Wind Power	0	70,000	WND	E	X		X		X	
Jericho Rise Wind Farm	0	79,200	WND	E	X		X		X	
Moresville Energy Center	0	99,000	WND	E	X		X		X	
Orion Energy NY I	0	100,000	WND	E	X		X		X	
Tug Hill	0	78,000	WND	E	X		X		X	
SII Rotterdam Junction	0	9,300	WND	F	X		X		X	
Total New Wind Generation					1,858,900	0	1,858,900	0	1,858,900	0

Q WHY DID YOU ASSUME THAT, WITHOUT NYRI, A 1,000 MW GAS-FIRED COMBINED CYCLE UNIT WOULD NOT BE BUILT IN UPNY UNTIL 2018?

1 A With or without NYRI, by 2018 there will be a need for additional
2 generation by the year 2018, based on the 2009 RNA forecast. Since
3 building generation in UPNY is less costly than in SENY, we added 1,000
4 MW of new combined-cycle generation in UPNY, rather than a similar
5 unit in SENY. Moreover, as shown in Table 1 above, despite the addition
6 of this 1,000 MW unit, we also added two 230 MW generation turbines
7 (GTs) in Zone G, one such GT in Zone I, and two more such units in Zone
8 J. In the without-NYRI case, we added the same two 230 MW GTs in Zone
9 J to avoid load curtailments, and a 600 MW combined-cycle unit in Zone
10 G.

11 Q PLEASE SUMMARIZE THE RESULTS OF YOUR PRODUCTION
12 COST SAVINGS ANALYSIS.

13 A The results of our production cost savings analysis for the years
14 2012, 2015, and 2018 are summarized in Table 3, below.

15 **TABLE 3**

Impact of NYRI on Production Costs in 2006\$ (Millions)					
	Year				
	2012		2015		2018
Base Case	\$	5,640.4	\$	6,282.3	\$ 7,120.3
With NYRI	\$	5,449.0	\$	6,085.5	\$ 6,805.6
Difference	\$	191.3	\$	196.8	\$ 314.8

1 **Q HOW DO THESE PRODUCTION COST SAVINGS COMPARE WITH**
2 **THE PRODUCTION COST SAVINGS PREVIOUSLY ESTIMATED BY**
3 **NYDPS WITNESSES GJONAJ AND WHEAT?**

4 A DPS witnesses Gjonaj and Wheat estimated production cost savings for
5 2012, 2015, and 2018 of \$128 million (2006\$) in 2012, \$83 million (2006\$) in
6 2015, and \$99 million (2006\$) in 2018. Again, however, as we discussed
7 previously, those witnesses artificially constrained the production cost
8 benefits of the NYRI project by constraining the generation mix in the
9 with- and without-NYRI cases to be identical.

10 **Q YOUR RESULTS SHOW A SIGNIFICANT INCREASE IN THE**
11 **ESTIMATED SAVINGS FROM THE NYRI PROJECT IN 2018**
12 **COMPARED WITH THE ESTIMATED SAVINGS IN 2012 AND 2015.**
13 **CAN YOU EXPLAIN WHY?**

14 A Yes. The NYISO 2009 RNA forecasts increasing load growth,
15 despite the 15x15 program. Loads grow most in SENY. Without added
16 generation from UPNY, more new generation must be built in SENY to
17 meet that growing load. As more generation is added, the potential cost
18 savings provided by NYRI grow, because the wind generation afforded by
19 NYRI allows for greater production cost savings.

20 In essence, our modeling shows that by 2018, the NYISO reaches a
21 “tipping point” where, despite the lower 2009 RNA load forecast and the
22 assumptions of 15x15 savings made by NYISO, significant new generating

1 capacity will be required. This is also consistent with the sensitivity
2 studies performed by NYISO in its 2009 RNA, which showed that
3 additional load growth of just 750 MW or an equivalent quantity of
4 additional generation retirements in New York City would lead to
5 violations of reliability standards.⁷²

6 **Q CAN YOU EXPLAIN WHY DIFFERENT MODELS ESTIMATE**
7 **PRODUCTION COST SAVINGS ESTIMATES THAT DIFFER?**

8 **A** Yes. All models are abstractions from reality and modeling a
9 highly complex system like the NYISO is particularly challenging. No
10 model can account for every single facet of how generation is dispatched,
11 the terms of every bilateral contract, the exact quantities of electricity that
12 can flow over a transmission line at any instant, how NYISO system
13 operators will account for unplanned events, and so forth. Nor can these
14 models perfectly predict the precise timing of new generation additions
15 and retirements, when new legislation may be passed, and so forth.

16 Every modeler, therefore, must make reasoned assumptions, and
17 every assumption can always be challenged. For example, NYISO's 2009
18 RNA forecasts lower peak loads in 2018 than its 2008 RNA. Yet, nobody
19 can predict with certainty what may happen in the intervening 10 years.

⁷² A description of the scenarios modeled by NYISO for the 2009 RNA and the impacts of those scenarios on LOLE are discussed on pp. 4-6 – 4-23 of the 2009 RNA.

1 And, while NYISO developed a variety of planning scenarios in the 2009
2 RNA, it did not assign specific probabilities to certain events, such as the
3 potential impacts of new environmental regulations.

4 What is important, therefore, is to ensure the overall modeling
5 framework is reasonable and that assumptions are consistent. To take but
6 one example, as we discussed previously, we assume that building NYRI
7 will provide greater incentives for new wind generation to be developed
8 in UPNY than without NYRI, because existing wind generation is already
9 “bottled up” there and there is little economic incentive for new wind
10 generation to be developed if developers cannot access the transmission
11 system in order to sell the output of their projects. We made that
12 assumption because, in our view, it is consistent with the NYISO
13 Transmission White Paper, which has stated that new transmission
14 capacity must be added if New York is to meet its RPS goals. We have
15 attempted to develop assumptions that are defensible, given the
16 information we have today.

17 **Q DOES THIS CONCLUDE YOUR TESTIMONY?**

18 **A** Yes.